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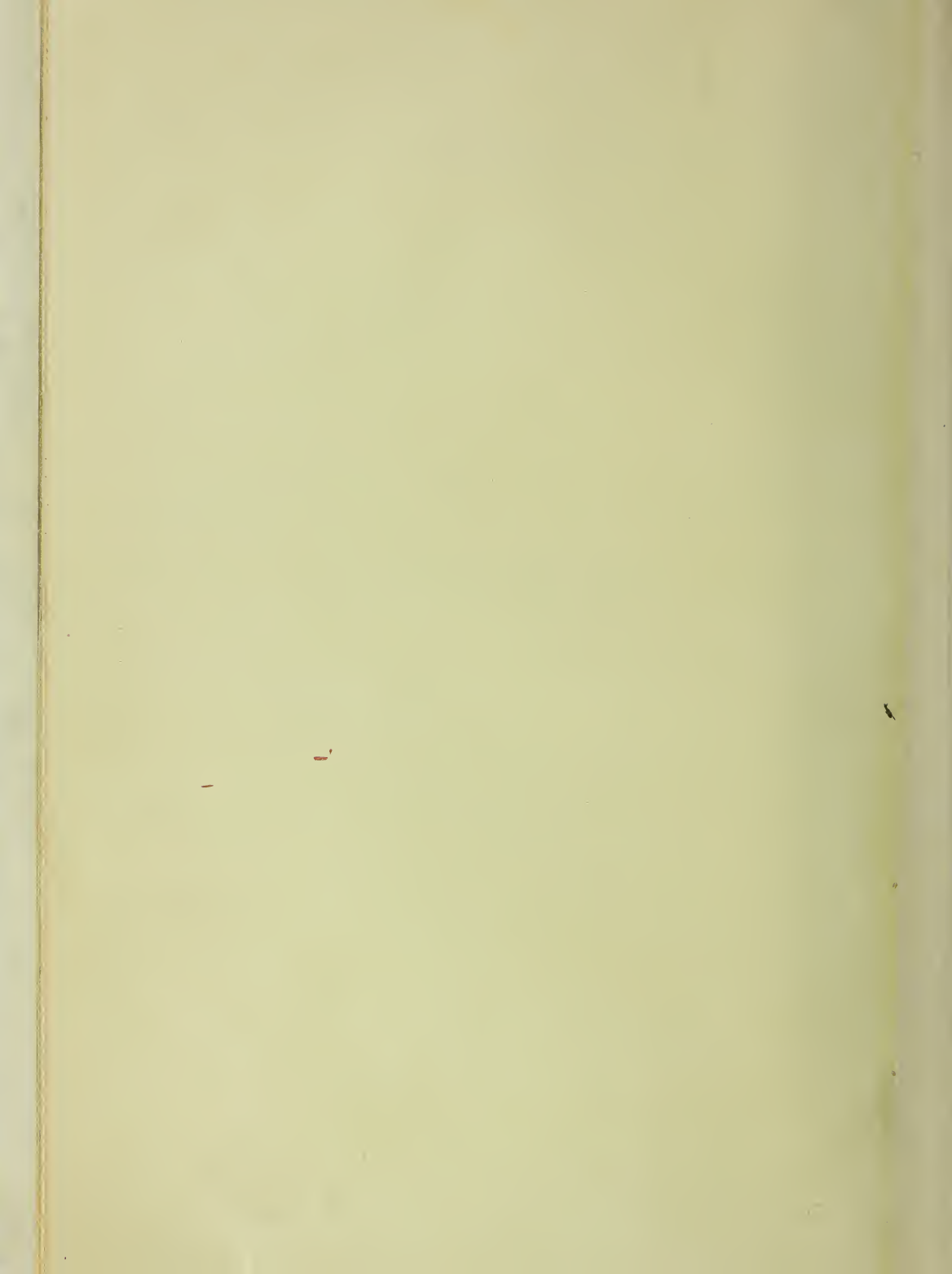
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FRANCIS DRAKE ON THE NORTHWEST COAST
OF AMERICA

THE GOLDEN HINDE DID NOT ENTER
THE BAY OF SAN FRANCISCO

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FRANCIS DRAKE
ON THE
NORTHWEST COAST OF AMERICA
IN THE YEAR 1579

THE GOLDEN HINDE DID NOT ANCHOR IN
THE BAY OF SAN FRANCISCO

GEORGE DAVIDSON
President Geographical Society of the Pacific

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Francis Drake on the Northwest Coast of America in the Year 1579

The Golden Hinde Did Not Anchor in the Bay of
San Francisco.

GEORGE DAVIDSON.

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PERSONAL AND INTRODUCTORY.

In 1889 we presented to the California Historical Society a paper entitled "Identification of Sir Francis Drake's Anchorage on the Coast of California in the year 1579."

In the first few years of our Coast Survey duties on this coast we accepted the opinion of others that Francis Drake had sailed the *Golden Hinde* into the Bay of San Francisco in June 1579.

When writing the first Coast Pilot of California, Oregon and Washington, 1855-1857, we had become interested in learning what the old navigators had seen and written of the coast they had discovered and the names they had given to special localities; and as our researches and experience advanced we were soon convinced that the daring and self-reliant Drake had never seen the Bay of San Francisco.

In the first four years of our work, 1850-1854, we were enabled to determine the geographic position of forty or more capes, anchorages, bays and islands from San Diego to the Gulf of Georgia; to assist in the preliminary surveys of nearly all the anchorages on the coast; and to sketch the orographic features of the seaboard from San Francisco to the Umpquah River.

As we became more familiar with the narratives of Drake's voyage we were convinced that the second circumnavigator had careened the *Golden Hinde* in the bay under the north shore of the eastern promontory of "la Punta de los Reyes," where the heroic Cabrillo and Ferrelo had struggled in vain to beat the *San Salvador* and *La Victoria* into the same anchorage thirty-seven years earlier.

In later years we might not have presented our proofs concerning this anchorage, but Mr. Justin Winsor had published his "Narrative and Critical History of America * * * Boston and New York, 1886-1888"; in which Rev. Dr. Edward Everett Hale had reached the conclusion that Drake had anchored in the present Bay of San Francisco.

In the "Identification" paper we barely touched on the question of the latitude to which Drake had reached in his assumed effort to find the northeast passage of North America as a problematic route of egress from the Pacific to the Atlantic. Nevertheless we were satisfied he never saw the coast beyond the latitude of forty-

two or possibly forty-three degrees, and that the *Golden Hinde* could not have reached the latitude of forty-eight degrees.

We had been in command of the clipper built brig *Fauntleroy*, belonging to the United States Coast Survey, and had made four voyages to Washington and Puget Sounds in April-June and November of each year; and therefore had some experience of what a well equipped sailing vessel of one hundred and forty tons could do.

In 1884-5 we critically examined the narratives of Ulloa, Cabrillo, Ferrelo, Vizcaíno and Drake, for a paper upon the "Voyages of Discovery and Exploration on the Northwest Coast of America, 1539-1603"; which was published by the United States Coast and Geodetic Survey in 1886. In the case of Cabrillo and Ferrelo we detected the systematic errors of their instruments; the fact that their latitude of 44° was made in heavy winter weather far out at sea; and that the error of their instruments reached one and one-half degrees. That fact reduced their highest latitude to forty-two and one-half degrees.

In Drake's case we have found errors of record as great along the South American coast. Upon this northwest coast we accept the records of observation of 42° and 38° ; but where "dead reckoning" or "estimation" is given we protest against accepting the results unless other conditions and circumstances conspire to qualify such judgments.

In the case of the high latitude of forty-eight degrees of Drake, we can not accept it upon the vague evidence that has been presented by his narrators or his advocates. We believe the statement in the "World Encompassed," written by Drake's nephew, is not true.

We appeal to the narrative of Richard Hakluyt, in "The Famous Voyage," for the lower latitude of 42° or 43° , because he was a man of education, a man in holy order, a collector and publisher of old voyages and travels, an enthusiast and withal he lived in London in the days of Drake's exploits. We appeal to the recorded dicta of Iodocus Hondius and of Robert Dudley, friends of Drake; and to the statements which William Camden, the annalist, obtained directly from Drake.

In a somewhat long life of activity on this coast in the lines of geodesy, astronomy, geography and navigation, with conditions and opportunities that will not again fall to the lot of one man, we propose, in this paper, to demonstrate that Francis Drake did not reach

the latitude of forty-eight degrees, and that he did not sail the *Golden Hinde* into the Bay of San Francisco.

That last honor was reserved for the Spanish "paquebot *San Carlos*" alias Toyson de Oro, in August 1775.*

**The Discovery of San Francisco Bay, and the rediscovery of the Puerto de Monterey*, George Davidson: published by the Geographical Society of the Pacific; May 1907.

THE GEOGRAPHIC AUTHORITIES AVAILABLE FOR DRAKE'S ENTERPRISE TO THE SOUTH SEA.

What geographic authorities were available to Drake before he left England late in the year 1577 ?

It seems proper in this place to refer to the restless activity which pervaded the sea faring countries of Europe during the first half of the sixteenth century. This was not prompted solely for the acquisition of geographic knowledge but for the wealth, tribute and empire which would accrue therefrom.

After the Bull of Donation of Pope Alexander VI, there was great activity manifested by Spain, Portugal, England and France along the coasts of the American continents. By the terms of that edict the Portuguese confined themselves to the southeast coast of South America, hoping to find a route to the East Indies;* Spain carried her explorations through the Gulf of Mexico and along the mainland. In 1517 the Spaniards founded Nata at the head of the Bay of Panamá, and in 1518 settled upon Panama as their seat of power on the South Sea, whence explorations were made to the northwest and southwest, looking westward toward the Spice Islands.

These advances aroused Spain to seek a direct ocean route to the Moluccas, already under the assumed control of Portugal. In 1518 Hernando de Magallanes y Ruy Faleiro made propositions to the King of Spain to make a voyage of exploration to las Islas del Maluco.

The Armada of five vessels left Sevilla August 10th, 1519, and started on their voyage September 20th. On the 8th of September, 1522, the remaining vessel *La Vitoria* returned to Sevilla.

The narrator Antonio Pigafetta returned to Italy and his account of the expedition was published in 1534 and subsequently a French translation.

These accounts aroused Spain to greater activity; Cortés fitted out vessels from New Spain for the exploration of the Pacific Coast, and for traffic with the Philippines. His ship yard was first at Navidad and later at Tehuantepec to save the long land transportation of iron work across the country from Vera Cruz.

*An edition of Ptolemy published at Rome in 1508 says the Portuguese reached the latitude of 50° S. on the east coast of America.

Cortés and his successor carried the Pacific Coast Surveys northward to Cape Mendocino by 1543.

At the height of Spanish enterprise an English edition of Pigafetta's narrative was published from the French translation in 1555.*

The exploits of Cortés, the discoveries of Loyasa, Saavedra, Villalobos, Hurtado, Ulloa, Cabrillo and Ferrelo, the Cabots, Cortereal and Frolisscher were known by report but mainly through the early maps dating from 1542 to 1570.

Editions of Claudius Ptolemæus had been published in Italy with the map of the world including North and South America, and the western coast to the northward of Lower California. In the edition of 1574 the northwest coast of America follows a general northwest direction to latitude 43° (Cabrillo's Cape Fortun) whence it trends indefinitely to the west with the legend "*Littus incognitum*", or coast unknown.

We condense the description of the maps yet enough is said to indicate that Drake was not raiding an unknown line of coast on the eastern and western sides of America. We do not know whether the maps of Pigafetta's narrative were published in the Italian, French and English editions but as Drake uses some of his names we give those which appear upon the map in the American edition by Robertson.

Mare Oceana [Atlantic Ocean], R grone patagonia, Porto di santo Juliano, Capo da Ie. n. m. vir. [Capo de le vndici millia vergine; i. e. Cape of Eleven thousand Virgins], Streto Patagonico, Capo dezeado [Cape Desire], and Mare Pacifico.

The map is not worthy the name; no one could locate it on the globe: the Strait of Magellan is nearly straight, and does not conform to the description in the narrative. There is no orientation, and the upper part is the southern.

The first map in which we can find any account of California is that by Alonzo de Santa Cruz, dated 1542. It has been quite exhaustively described by E. W. Dahlgren, and we need to mention only such items as refer to the northwest coast of America.† It evidently covers the discoveries of Cortés and Ulloa, and is therefore earlier than the expeditions of Cabrillo and Ferrelo. Nor is there any Terra Australis laid down upon it. California is called

*Robertson's *Magellan's Voyage Round the World*, Vol. I, page 13.

†*Map of the World* by Alonzo de Santa Cruz 1542. Explanations by E. W. Dahlgren. Stockholm 1892. Large 8vo.: 48 pages. See pages 26, 27 and 47.

"ya que descubrio el Marques del valle";* the island discovered by Cortés; and the coast north of this is "tierra que enbio a descubrir don antonio de mendoça," the land to which Don Antonio Mendoza sent an expedition." This was the expedition of Francisco de Ulloa in 1539.

And from this map we learn that Cortés took formal possession of California on the 3rd of June 1535, although the news did not reach Spain until 1537. He did not know it was part of the continent.

It is evident that Spain was active in publishing the accounts of new discoveries by her navigators. This view is fortified by the early publication of the results of the next expedition sent out by the Viceroy Mendoza to still farther explore the coast north of the highest latitude reached by Ulloa.

Herrera in his chronicles of the Indias, Nueva España, North and South America, and the Pacific Ocean has illustrated his descriptive text with fourteen very old charts and maps.† They must have been copied from the earliest charts drawn by the Spanish cartographers. On chart No. 7, "Descripcion de las Yndias de Mediodia" we find the "Estrecho de Magallanes" with a continental area to the south; and to the north, on the eastern coast the "P°. de S. Julian."‡ On the Chart No. 1, is the "Descripcion de las Yndias Occidentales" which embraces North and South America and the Pacific.§ Upon this chart is the Estrecho de Magallanes; and to the northwestward of the peninsula of "California" is laid down the "C. de Fortun" in latitude 43°, whence the coast trends indefinitely to the eastnortheast. In the western part of the Pacific Ocean, which is called the "Mar del Sur," south of the tropic of Capricorn, we find Japón, yas de los Ladrones, Filipinas, Molucas, Nueva Guinea, etc.

The name Fortun recalls the discovery by Ferrelo February 26, 1543, of the "Cabo de Fortunas" or Cape of Dangers which he

*Cortés believed the southern extremity of the peninsula to be an island and not connected with the main land to the eastward.

†*Descripcion de las Indias Occidentales* de Antonio de Herrera Coronista Mayor de Sv Magd de las Indias y Sucoronista de Castilla. Al Rey Nro. Señor, Madrid 1730. Five volumes with charts and maps. See charts opposite pages two and twenty-eight of the Description, Volume I.

‡On this chart is laid down the "Meridiano de la Demarcacion", of 30° west longitude according to the Bull of Donation of Pope Alexander VI, 1493.

§With the legend, "Entre de los dos Meridianos Señalados Secontiene la Naúgacion y descubrimiento que competé a los Castellanos." On the meridian separating the regions assigned to Spain on the west and to Portugal on the east, is the description "Meridiano de la Demarcacion por la Parte Occidental," but the longitude is not given.

placed in latitude 41° . This cape is our Cape Mendocino in latitude $40^{\circ} 26'$. Ferrelo says they reached the latitude of 44° ; but his instrument had an error of $+1^{\circ} 30'$ and the vessel was at least seventy-five miles off shore in latitude $42^{\circ} 30'$ March 1st, 1543.*

By comparing this chart with that of Michael Lok it is evident that Lok had within his reach some chart based on Ferrelo's report, because we find the sudden change of direction of the coast to the eastward just north of C. de Fortun, and the same range of mountains under that eastern trend.

The map of "The New Hemisphere reduced from Ramusio 1556," is shown in Stevens' Historical and Geographical Notes; London, 1869. It is on plate I and numbered 3. South of the Magellan Strait is the Terra del Fuego enlarged into a southern continent. To the northward the coast of La Nova Spagna is carried northwestwardly to latitude 38° ; and thence it trends indefinitely to the northeastward to Quiuia and the Sierra Nevadas of Cabrillo and Ferrelo in latitude 44° .

In one of the Smithsonian publications† there is given a map entitled "The Interior of New Spain" after Mercator, and dated 1559. On this map we find reference to the great number of whales which resorted to the California Coast, and more especially to that of Lower California where they brought forth and guarded their young. Off the southeast part of the peninsula is the legend "California alys punta de vallas"; and the name India is placed in the southeast part of New Spain.

In 1570 Abraham Ortelius published his atlas "Theatrum Orbis Terrarum"; and in the map "Tartario sive Magni Chami Regni", California is a peninsula with the name "C. Califormio"; and again in his description of "America sive orbis nova descriptio", Cape San Lucas is named "C. Cali, formia."

There may be other charts of date preceding 1577, but we do not have any reference to such.

Personally Drake had scoured the towns and cities on the coast of the Gulf of Mexico from 1572 to "Sunday, at Sermon time, Aug. 9, 1573." He is said to have seen the South Sea from a tree top

**Voyages of Discovery and Exploration on the Northwest coast of America, 1539-1603*, Washington 1886. Davidson, page 235.

†Smithsonian Institution; Bureau of Ethnology, Annual Report for 1892-93, Part X: See the article on the Coronado Expedition of 1540-42.

overlooking the Bay and city of Panamá. In that marauding expedition he had captured marvellous wealth, and doubtless had acquired much information for use in future adventures; for the supposed sight of the Pacific, and the reported wealth of Panamá had inflamed his ambition and his reported purpose of revenge.

On his 1577 raid when off the island of Santiago, one of the Cape de Verde group he captured a Portuguese ship from Santa Maria, and took therefrom the pilot Nuno da Silva, to act in that capacity with him on the coast of Brazil, and whom he carried to the coast of Mexico and then put him ashore at Guatulco at the mercy of his enemies.

At the Strait of Magellan he gave orders for the ships of his expedition to rendezvous at latitude 30° South, on the west coast of South America, in case of their separation by bad weather. He very probably had knowledge of the harbor of Valparaiso a little to the northward of the point of meeting; and proposed a show in force at Valparaiso.

As he followed the American coast northward he seized another pilot at La Mocha in latitude $38^{\circ} 24'$ South, and thenceforth carried pilot after pilot from the captured vessels; and utilized whatever sea-charts he found.

We can get a graphic illustration of the knowledge available from the first volume of Captain James Burney's "South Sea Discoveries." He there presents us with "A Chart of the Discoveries "Made in the South Sea or Pacific Ocean previous to A. D. 1579."* The American Coast stretches from the Strait of Magellan to latitude $47\frac{1}{2}$ north, ending there in a faint line as if he doubted the last three or four degrees. It is a fair presentation of the main features as we know them to-day. The western coast of America, north and south, is remarkable for its high, bold outline, its sky line of volcanic activity; its deep water, and the absence of outlying shoals and hidden dangers.

If there were a lingering doubt about the early discoveries of the Portuguese and the Spaniards we give an extract from the narrative

*It should be borne in mind that Captain Burney's chart is based upon the modern longitudes of the places named by the old navigators and the governors. Burney was first lieutenant of the *Discovery*, Captain Charles Clerke, in the third voyage of Captain Cook to the Pacific in 1776.

of Pifagetta, who accompanied Magallanes on his voyage of circumnavigation.*

And then we quote from the *World Encompassed*.

"But the captain-general [Magallanes] who knew where to sail to find a well hidden strait, which he saw depicted on a map in the treasury of the King of Portugal, which was made by that excellent man Martin de Boemia, sent two ships * * * to discover what was inside the cape de la Baia."

And from the *World Encompassed*:

"In the reports of Magallanes' voyage, it is said:" page 35.

"The next day after, being the twentieth of June wee harboured ourselves againe in a very good harborough, called by Magellan *Port St. Julian* where we found a gibbet standing upon the maine, which we supposed to be the place where Magellan did execution upon some of his disobedient and rebellious company"; p. 234.

"Magilanus performing the first voyage about the world, falling with this port, as wee did, did first name it *Port St. Julian*." Page 68 n.

"We fel with the cape, neere which lies entrance into the straight, called by the Spaniards *Capo Virgin Maria*," page 71.

When Francis Fletcher is speaking of his having been landed on the extreme southern point of Cape Horn to erect a monument thereon, he writes: "Indeed, it might truly before this time be called *incognita*, for howsoever the mappes and general descriptions of *cosmographers* * * haue set downe, yet it is true, that before this time it was neuer discovered or certainly knowne by any traueller that wee haue heard of. * * * On the 30 of *October* we set saile, shaping our course right North-west to coast along parts of *Peru*, (for so the generall mappes set out the land to lie), both for that we might with conuenient speed, fall with the height of 30 deg., being the place appointed for the rest of our fleete to reassemble;" etc. "Wee found that the generall mappes did erre from the truth in setting down the coast of *Peru*, for 12 deg. at least to the Northward of the supposed strait." Pages 89 to 92.

In another part of the narrative we find a statement made at the capture of the *Cacafuego* off Cape San Francisco [in latitude

*Pifagetta's history of that voyage was published in Venice in 1534, and that by Ramusio in 1568. We appeal to the "*Magellan's Voyage Around the World*" by Robertson, 1906: see Bibliography.

0° 42' north], when they were debating how to return home: "From this cape, before we set onward, *March* the 7, shaping our "course towards the Island of *Cainos*, with which we fell *March* 16." Page 112.

Little wonder that with such information, such opportunities for seizing pilots, and so bold a coast line free from storms that Drake traversed it so safely and fearlessly. Many vessels had been there before him. He went from port to port as "*Pedro por su Casa*."

EARLY ENGLISH AUTHORITIES THAT HAVE GIVEN AN ACCOUNT OF FRANCIS DRAKE'S EXPEDITION OF 1577-80.

There are many circumstances in this part of the career of the daring circumnavigator which are conspicuous by their absence.

We have no authentic and circumstantial narrative of the daily occurrences of that famous voyage. No detailed account of the transactions at important epochs have been given the mark of unbiased truthfulness.

It is nowhere shown that some one of the adventurers was deputed to keep a log of the ship's geographic position and of the weather, or what instruments and methods were used. At best the instrument for obtaining the latitude was liable to error reaching one or two degrees; and the determination of the longitude was mere guess work.

Yet they must have kept a daily record because when the vessel returned to Plymouth, they found they had "lost a day" as Magellan had. This was clear proof that they had kept their daily reckoning but they could not account for their arrival on Sunday being Monday to those who had staid at home. They tried to account for it by attributing it to the different climates they had passed through. The astronomers did better for Magallanes.

It is notable that when Drake returned home none of his instruments were preserved as a record of a surpassing feat in navigation. There is no record of a gun being preserved as a trophy. The English flag that had floated around the globe is never mentioned. What would be its place today?

We know that a chair was made from the timbers of the historic *Golden Hinde* and now stands in the Bodleian Library, Oxford.

Beyond the short, irregular and uncertain writings in the British Museum and the great libraries there must be some long forgotten and perhaps invaluable recitals of the intensely interesting events of 1577-80.

Mr. Robert M. Brereton states that "Mr. T. Chubb of the Map Department of the British Museum writes me that he has come across in the MSS Department of the British Museum, a letter from De Mendoza, the Spanish Ambassador in London, to King Philip of Spain, dated 16th October, 1580, in which it states 'Drake has

“ ‘given the Queen (Elizabeth) a diary of every thing that happened
 “ ‘during the three years he was away.’ ”

Search has been made for this diary but it is not in the Royal Collection at Windsor Castle, nor in the Public Office. Let us hope that diligent and persistent search may be rewarded in finding such a treasure. It had not been found at the end of January 1908.

Regretting the absence of the ship's log or a narrative as satisfying as those which Cook and Vancouver have given to later generations, we take up the somewhat tangled thread of events twisted by Drake's contemporaries.

There were several authorities of Drake's day who had direct information from him, or from his associates on that voyage, or from "Francis Fletcher, Minister of Christ and Preacher of the "Gospel, adventurer and traveller in the same voyage", who was "pastor and preacher of the fleet." (World Encompassed.)

Of those who record that the *Golden Hinde* reached the latitude of 42° or 43°, we have Richard Hakluyt in his "Famous Voyage"* while Drake was in the heyday of his glory. He was a historian and author of "the Principall Navigations of the English Nation", London, 1589. He obtained his material from Drake himself.

Hakluyt appreciated the need of more extended geographic knowledge in various lines of exploration. He urged upon the Queen the necessity for establishing a school of Commerce and Navigation; but England was drunk with ill gotten wealth and the defeat of the Armada, and his voice was unheeded. He urged a reader upon the Universities, but there was no response: even Drake failed to answer the appeal.

The great Universities have not risen to the necessity of such a course as proposed by Hakluyt, although the British flag covers one-half of all the sea going commerce of the world.†

IODOCUS HONDIUS (Joos de Hondt) a Hollander settled in London as a cartographer and engraver. He engraved the chart of the two

**The Famous Voyage of Sir Francis Drake in the South Sea, and There Hence About the Whole Globe of the Earth, begun in the Yeere of our Lord, 1577.*

†In the case of Hakluyt the verities of history are badly mangled in the *Encyclopædia Britannica*, Edition 8 of MDCCCLIV, Vol. VI, page 97, cols. 1-2. The writer of the article California says: "though the gold mania in California dates only from 1848, yet the existence of that metal in the country has been long known to travellers. Richard Hakluyt who accompanied Drake in his expedition in 1577-79 in describing the region [California] says " 'there is no part of the earth here to be taken up wherein there is not a reasonable quantity " 'of gold or silver.' "

hemispheres, (1595?) on which is the statement over New Albion that Drake reached the latitude of 42° ; and has laid down his track to about 43° , or west of Cape Blanco of Aguilar (1603); and he also has an inset of the *Portus Novæ Albionis*. We have thus his engraved statement of the position, and also why he got no farther north.

THEODORE DE BRY, the engraver of Frankfort-on-the-Main was interested in the discoveries of Spanish America. Mr. Robert M. Brereton has lately quoted two extracts from his "*Historia Antipodum oder Neue Welt*" which place it in 42° , and in 43° north latitude.

We translate them as follows: p. 348. "Thence they sailed from "the 16th of April to the 3^d of June. On the 5th of June, when in " 42 degrees of North Latitude, they found such cold weather that "the people were unable to bear it, and were therefore compelled to "seek for land; and found a level land, but as it was entirely covered with snow they did not land; so they sailed slowly to within " 38 degrees of the line; there they found a beautiful Sea-Bay, in "which they anchored."

Page 442. "On the 17th of February 1579 they found themselves "at Acapulco [sic] in New Spain, whence they sailed for some time "until they reached 43 degrees of Latitude; there they found the "atmosphere so extremely cold they were scarcely able to keep "warm even with much exercise. After that they came to a beautiful Sea Harbor of America, named New Albion, in 38 degrees."*

Acapulco is 225 geographic miles west-northwest from Gatulco.

A copy of the northern half of De Bry's "*America Sive Novus Orbis*," 1595, is given in Part I of the Annual Report of the Bureau of Ethnology, Washington, 1892-93, page 393; and a copy of the

*P. 348. Darüber schiffete er von dem 16 Aprilis, an biss auf "f" den 3 Junii. Befand aber "den 5 Juni, unter dem 42 grad. nach dem Polo Arctico ein solche Kälte dass sein Volck, "dieselbige nicht mehr verbragen kunt, ward derhalben benötigt ein Land zu suchen, und fand "ein eben Land, aber weil es gantz mit Schnee bedeckt, ländete er daselbst nicht an, sondern "schiffte weiter unter den 38 , grad. der lini, alida er ein schönen Meerbusen fand, und warff sein "anker aus."

On page 442: "Den 17 Februarii 1579 befunden sie sie vor Acapulco [sic], in New Hispanien, von dannen als sie abgesegelt, kamen sie über etliche Zeit unter den 43 . Grad der Höhe, "da sie denn eine so grosse Kälte der Luft befunden, dass sie sich kaum und mit grosser Mühe "wiederumb zu erwärmen vermocht. Darnacht kamen sie in einen schönen Meer Hafen von "America, New Albion genannt, unter dem 38 , Grad.

As quoted by Mr. R. M. Brereton in his pamphlet "Question. Did Sir Francis Drake land on any part of the Oregon Coast?" See Bibliography.

De Bry's different publications date from 1590 to 1615.

title page of his "*Hispaniae Novae Sive Magnae, Recens et Vera Descriptio*", 1595; p. 520; to show his buffalo.

In Mr. Brereton's pamphlet we find three maps; the first is part of the Hondius map of 1595(?), the second is the Dudley Carta Particolare of 1646, and the third is the northwest part of a map new to us. For more information about the latter we wrote to the British Museum and obtained the title, etc. "The title of Gabriel "Tatton's chart of the Pacific is as follows: *Maris Pacifici quod uulgo Mar del Zur cum regionibus circumiacentibus, insulisque in eodem passi sparsis, nouissima descriptio G. Tattonus Auct. 1600. Benjamin Wright Anglus cœlator. Milliarum Germanicarum quorum 15 uni gradui respondent, 100 [=27 mm.], [London.] 1600.*" Maps 46. a 4. (3). Size 530x405 mm. The scale of the map is 450 geographic miles to the inch.

Mr. Basil H. Soulsby adds: "We are not aware of any text having been issued with the chart. We believe the chart was published in London as the engraver Benjamin Wright is sometimes described as a citizen of London on other maps by him." March 14th 1908.

In this chart the much indented coast line from latitude 29° to 41° has a general direction northwest by north with twelve coast names; thence for twenty-four hundred miles the coast line is nearly straight, and the direction west by north without any particular name but the legend, "*De este Cibo Mendocino Hasta el Estrecho de Anian esta por Descubrir.*"*

C. Mendocino is placed in latitude 41° at the change of the direction of the coast; and above it is depicted a range of high sharp-peaked mountains.

To the west of Cape Mendocino is Nova Albion and above that name the legend: "*Noua Albion Terra sub latitudine 42 adeo est frigida etiam media æstate ut F. Dracus præ ingenti frigore, in Austr. reuertí coactus fit, mense Junio. Incolæ idolotatræ sunt, corporumque foedis lacerationibus et crebris sacrificijs in montibus et utuntur.*"

South of Cape Mendocino we meet names pointing to the expedition of 1542-43. Naming some of them in order we have Náuado, B. de Cabrillo, R. de Sardinias, B. de San Miguell, P. de San Pedro, P. de la gallera, [34°], R. de Limpiero, etc.

*This long stretch of the coast to the westward suggests the same source of information used by the author of the Ptolemy edition of 1574, where the "unknown coast" trends directly west from latitude 43°; and by Dourado in his chart of 1580.

These names indicate that the cartographer had access to the material furnished by Cabrillo and Ferrelo, and had some Drake material as shown by the name Nova Albion and the legend referring to the latitude he reached and the cold he experienced. This material relating to Drake he evidently obtained from Hondius because he uses, with slight change, the Latin legend on the *Portus Novæ Albionis* of the inset map; 1595?

WILLIAM CAMDEN the annalist and antiquary of that period, who was a contemporary of Drake and received his account directly from Drake, who related it to him, is one of the reliable authorities. From his "*Annales Rerum Anglicarum et Hibernicarum Regnante Elizabetha 1615*" Mr. R. M. Brereton quotes as follows:

"Drake then took his way toward the north at the latitude of 42 degrees, to discover in that part if there were any straight, by which he might find a nearer way to return; but discerning nothing but darke and thicke cloudes, extremity of cold and open cliffs covered thicke with snow, he landed at the 38 degree, and having found a commodious Rode, remained there a certaine time." Pages 424-5.

Robert Dudley, Duke of Northumberland, son of the Earl of Leicester, resident many years in Italy was the author of the three large volumes of the *Arcano del Mare*, 1630-47. In his description he states that he obtained his account of Drake's expedition to the Pacific from the navigator himself. His work is illustrated by many charts of which two relate more especially to this coast.

One of these charts is the "*Carta prima Generale d'America*," etc., and in it the coast of California is laid down as far north as "C. Mendocino ó C. Corrientes" in latitude 43°; and as far south as Cape San Lucas. The part of the coast embracing Upper and Lower California is designated "*America Maestrale*"; in latitude 42½ the country is named "*Nuoua Albione*," and south of latitude 40°, "*Quiuira R.*" Inside of C. Mendocino is the legend "*Alcuni Mettono il C. Mendocino in 41 Grado. di Latitudine, la Costa é Fredda.*"*

The second chart is the "*Carta Particolare*." Upon it is laid down the Coast of Japan only three hundred and ninety geographic miles from the Coast of America in latitude 45°. In latitude 46½° is laid down "*Regno de Qvivira*; in latitude 43½° is the legend "*Costa*

*Volume I, part II, p. 19: 1 1630.

Scopera dal Drago Inglese nel 1579 é fredissim"; and between 42° and 41° (we translate) "Some common charts place Cape Mendocino in 50° and Cape Fortunas in 60° , which are gross errors "because Drake and the Spanish Pilots found Cape Mendocino to "be in 40° of latitude."

For further particulars see our Identification paper of 1890: pp. 12-13 and 48-51.

We may add that among the animals found at the Portus Albionis, Drake, "with the greatest wonder, saw many native horses, "which the Spaniards had never seen before in America; and the "reason why Drake sought and found this port was this, that having "passed the true Cape Mendocino in latitude $42\frac{1}{2}^{\circ}$ to procure water, "even from the latitude $43\frac{1}{2}^{\circ}$ he found the coast so very cold in the "month of June that his people were not able to bear it which they " marvelled much, the country being so much like that of Tuscany "and Rome; therefore Drake found it expedient to return more "towards the Southeast, even to 38° of latitude; and in seeking for "water he discovered that port, and the country he had been the first "to examine was named by him Nuoua Albion in honor of his "country England which was long before named Albion," etc.*

These are the old authorities for the lower latitude; and come directly from the men of Drake's time who were interested in the account of his ventures and exploits.

Of those who give their voice for the higher latitude are John Davis the Arctic Navigator who made three voyages to the north-east coast of America, in 1585,* 1586, and 1587. John Drake a brother of Francis Drake who was a prisoner at Lima; an unnamed authority who wrote in the characters of the time, and Sir Francis Drake, a nephew of the circumnavigator, and who compiled the *World Encompassed*.

In 1595 John Davis, Arctic Navigator, published his "Worldes Hydrographical Discription."† His dissertations have been re-

*Volume III, Part II, Book VI, page 58. The original is given on page 50 of Identification Paper.

*He was the inventor of the Back-staff or Davis quadrant which continued in use until the later invention of the sextant.

†*The Worldes Hydrographical Discription* wherein is proued not onely by Authorities of Writers but also by late Experience of Trauellers. * * * Published by J. Davis of Sandruid by Dartmouth in the Countie of Deuon, Gentleman. Anno 1595 May 27. * * * London 1595. Reprinted by the Hakluyt Society 1812.

published by the Hakluyt Society, and quoted by Dr. Twiss and others.

He has a chapter "to proue that America is an Iland, & may be "sayled round," page 57; and without coherence of statements he writes: "the first Englishman that gaue any attempt vpon the "coastes of West India being a parte of America was syr John Haw- "kins knight." page 56.

Whatever had been done before "was a matter doubtfull & re- "ported the extremest lymit of danger to sayle vpon those coastes."

When he writes of Drake's passage through the Strait of Magellan he doubts whether there had been such a navigator as Magallanes or whether such strait existed.

After Hawkins "succeeded Syr Francis Drake in his famous and "euer renowned voyage about the world. * * * So that before "his revealing of the same the matter was in question, whether there "were such a passage or no, or whether Magillane did passe the "same, if there was such a man so named." Page 58.

Davis warms up to the difficulties of the perilous passage encountered by Drake, who fought his way through "hell darke nights, & "in all the fury of tempestious stormes."

"And after that Syr Francis was entred into the South Seas he "coasted all the Westernne shores of America vntill he came into the "Septentrionall latitude of forty eight degrees being on the backe "syde of Newfound land. And from thence shaping his course "towardses Asia found by his trauels that the Ills of Molucca are dis- "tant from America more then two hundredth leagues, howe then can "Asia & Africa be conioyned & make one continent to hinder the "passage"; * * Page 59. We refrain from continuing the quo- tation because it condemns those who do not accept his opinion in language that may have been permissible in that age, but can not be printed today.

We are satisfied the critic can give no weight to the latitude claimed by Davis; it would be a waste of time to show his ignorance of the subject.

JOHN DRAKE, who was with Drake.

"Narrative Drawn from Declarations which John Drake, English- "man, Being a Prisoner in Lima, gave of the Voyage Which His "Cousin, Francis Drake, Made to the South Sea, Through the "Straights of Magellan in the year 1580, Till his Return to England, "Etc., Before the Inquisitor at Lima, 1581."

"They then shaped their course by northeast and northnortheast "and proceeded 1000 leagues as far as latitude 44 deg., always on "the bowling. Afterwards they tacked about and went to Cali- "fornia and discovered land in 48 deg., where they landed in order "to take up their quarters, and remained there a month and a half "repairing their ship and taking in her sea provisions which were "Mareleones and wolves." (From translated narrative in "The "Western Antiquary," Plymouth, November, 1888, p. 83.) As quoted by Mr. R. M. Brereton.

The courses laid down in this statement are erroneous, but it would appear that the *Golden Hinde* was always close-hauled after leaving Guatulco, until she tacked inshore. She reached latitude 44° and when she made the land in 48°, she anchored there, refitted, etc. It would seem that he gave the latitude 48° instead of 38°.

An unnamed authority of the time places the *Golden Hinde* in 48°; and her harbor for refitting in 44°.

From "Guatulco" Drake "departed, sayling northwards till he "came to 48. gr. of the septentrionall latitud, still finding a very "lardge sea trending toward the north, but being afraid to spend "long time in seeking for the straite, hee turned back againe, still "keping along the cost as nere land as hee might, vntill hee came to "44. gr., and then hee found a harborow for his ship where he "grounded his ship to trim her, etc."*

*See Hakluyt Society's *World Encompassed*, page 183, Appendix III. A "short abstract of the present voyage in the handwriting of the time."

THE WORLD ENCOMPASSED.

The sole claim for the higher latitude of 48° is based upon the narrative of the *World Encompassed*, and we give the following extracts covering the case.*

"From *Guatulco* we departed the day following, viz., *Aprill* 16, "setting our course directly into the sea, whereon we sayled 500 "leagues in longitude, to get a winde; and betweene that and *June* "3, 1400 leagues in all, till we came into 42 deg. of North latitude, "where in the night following we found such alteration of heat into "extreame and nipping cold, that our men in generall did greuiously "complane thereof, some of them feeling their healths much im- "paired thereby; neither was it that this chanced in the night alone, "but the day following carried with it not onely the markes, but the "stings and force of the night going before, to the great admiration "of vs all; for besides that the pinching and biting aire was nothing "altered, the very roapes of our ship were stiffe, and the raine which "fell was an vnnatural congealed and frozen substance, so that we "seemed rather to be in the frozen Zone than in any way neere "vnto the sun or these hotter climates.

"Neither did this happen for the time onely, or by some sudden "accident, but rather seemes indeed to proceed from some ordinary "cause, against which the heat of the sun preuailes not; for it came "to that extremity in sayling but 2 deg. farther to the Northward "in our course, that though sea-men lack not good stomaches, yet "it seemed a question to many amongst vs whether their hands "should feed their mouthes, or rather keepe themselves within their "couverts from the pinching cold that did benumme them. * * *

"The land in that part of America, bearing farther out into the "West, than we before imagined, we were neerer on it than wee "were aware; and yet the neerer still wee came vnto it the more "extremitie of cold did sease vpon vs. The 5 day of *June*, wee "were forced by contrary windes to runne in with the shoare, which "we then first descried, and to cast anchor in a bad bay, the best

**The World Encompassed* by Sir Francis Drake, being his next voyage to that of *Nombre de Dios* formerly imprinted; carefully collected out of the notes of Master Francis Fletcher, Preacher in this employment, and diuers others his followers in the same; offered now at last to publike view, both for the honour of the Actor, but especially for the stirring up of heroick spirits to benefit their Countrie, and eternize their Names by like noble attempts. London: Printed for Nicholas Bovine, and are to be sold at his shop at the Royal Exchange, 1628."

There were also editions in 1635 and 1652.

Works issued by the Hakluyt Society.

The *World encompassed* by Sir Francis Drake, M.DCCC.LIV.

“roade which we could for the present meete with, where wee were
 “not without some danger by many of the extreme gusts and
 “flawes that beate vpon vs, whic if they ceased and were still at any
 “time, immediately upon their intermission there followed most uile,
 “thicke, and stinking fogges, against which the sun preuailed nothing,
 “till the gusts againe remoued them which brought with them such
 “extremity and violence when they came, that there was no dealing
 “or resisting against them.

“In this place was no abiding for vs; and to go further North,
 “the extremity of the cold, (which had now vtterly discouraged our
 “men) would not permit vs; and the winds directly bent against vs,
 “hauing once gotten vs vnder sayle againe, commanded vs to the
 “Southward whether we would or no.

“From the height of 48° deg., in which now we were, to 38, we
 “found the land, by coasting alongst it, to bee but low and reason-
 “able plaine; euery hill (whereof we saw many, but none verie high),
 “though it were in *June*, and the sunne in its neerest approach
 “vnto them, being couered with snow.

“In 38 deg. 30 min. we fell with a conuenient and fit harborough,
 “and *June 17* came to anchor therein, where we continued till the
 “23d day of *July* following.” Pages 113–115.

“Though we searched the coast diligently vnto the 48 deg. yet
 “found we not the land to trend so much as one point in any place
 “towards the East, but rather running on continually North-west,
 “as if it went directly to meet with Asia; and euen in that height,
 “when we had a franke wind to haue carried us through had there
 “beene a passage, yet we had a smooth and calme sea, with ordinary
 “flowing and reflowing, which could not haue beene had there beene
 “a frete; of which we rather infallibly concluded, then coniectured,
 “that there was none.” Pp. 118–119.

The *Golden Hinde* was anchored in Drake's Bay: then hauled
 upon the beach on the south shore, hove down and cleaned, repaired,
 and supplied with wood and water.

Drake took possession of the country for the Queen; was “twice
 crowned” by the untutored, half clad natives who understood not a
 word of the language.

The vessel sailed from this anchorage on the 23d of July,
 passed the Northwest Farallones that are inaccessible: laid-to off
 the Southeast Farallon, and took on board a quantity of seal meat.
 Drake named these two groups “the Islands of Saint *James*”; page 134.

"This country our Generall named *Albion*; and that for two causes; the one in respect of the white bancks and cliffes which lie towards the sea; the other that it might haue some affinity, euen in name also, with our own country, which was sometime so called." Page 132.

We find in this definite statement about the latitude attained June 3d, namely 42° ; and continuing northward (against a strong wind) they estimated the vessel reached two degrees farther. On the 5th they were forced by these contrary winds to haul to the eastward when they made the land, and anchored in a bad bay where they could not land, and yet the latitude is suddenly changed to 48° , although the northwesterners had forced the ship to seek shelter under the land.

This claim of making six degrees of latitude, to say nothing of longitude, can not be accepted by any navigator.

THE RELATIVE VALUE OF AUTHORITIES.

In this enumeration the preponderance of authority is decidedly with those who have placed the *Golden Hinde* in latitude forty-two, or forty-three degrees near the parallel of Cape Sebastian in $42^{\circ} 20'$, or of Cape Blanco or Orford in $42^{\circ} 50'$. Moreover they had no personal interest in exaggerating the latitude. That was left to the nephew of the bold navigator.

Times and national conditions have changed.

In this examination of writers and critics who have passed judgment upon the question of latitude, we recall but one who had been on this coast as a navigator; Captain James Burney, R. N., who was the first lieutenant on the *Discovery*, Captain Charles Clerke, of Cook's third voyage of exploration in the North Pacific, 1776-1778. In that case Captain Cook's vessels, the *Resolution* and *Discovery*, when in latitude $44^{\circ} 33'$ March 6th 1778, made the landfall of Cape Foulweather in $44^{\circ} 46'$. This was at least two degrees north of Drake's landfall.

Captain Burney in his five volumes of "South Sea Discoveries," 1803-1817, has accepted the authority of the World Encompassed, and gives his adherence to latitude 48° .

Of those who have spoken of Drake's anchorage near latitude 42° , not one has been acquainted with the peculiarities of the coast between 42° and 48° . From latitude 38° to 48° this coast is devoid

of harbors of refuge against northwest winds and swell, and against the southeasters of winter. It is only by an intimate knowledge of the shores that any one finds where some small refuge may be found under the high hills and mountains overlooking the sea.

We have ventured to name Chetko Cove in latitude $42^{\circ} 03'$ as the anchorage whence the *Golden Hinde* was driven. We have anchored and landed there, but dared not trust landing the transit and latitude instruments through the heavy surf on a heavy gravel beach. It lies in the Northeast part of Pelican Bay, which is a broad bight open to the Southwest, and named Pelican Bay by La Pérouse who passed it September 7th 1786, doubtless on account of the numbers of pelicans he met along the coast. In 1792 Vancouver named it Saint Georges Bay; April 23, 1792.

If Drake was as high as the latitude of the Orford Reef, he would not have dared to seek shelter at Port Orford. We were on duty there three or four months in 1851-2, and again in 1853, and are still interested there; but only a navigator well acquainted with the peculiarities of the approaches would venture there unless under steam.

If not at Chetko Cove there are only the rocky, exposed Crescent City Bay in $41^{\circ} 45'$, with the extensive reef of Vancouver's Dragon Rocks to balk a vessel's approach from the Northward; Trinidad Bay in latitude $41^{\circ} 03'$, is a small, contracted anchorage with no sunken dangers. These would afford temporary anchorage. Far to the north is the anchorage under Yaquinna Head in latitude $44^{\circ} 36'$, but the *Golden Hinde* did not reach so far north.

We know every mile of that coast and have been at every anchorage, and therefore have facts to sustain our judgment.

DID DRAKE USE SPANISH COLORS ?

In the narratives and authorities which we have consulted we notice no reference to Drake having hoisted Spanish colors on the western coast of America, yet the incidents attending the capture of the *Cacafuego* indicate clearly that he deceived her commander by showing Spanish colors. And there are incidents in other captures that indicate the same method of surprising the Spanish vessels.

None of the later writers have hinted at this practice which has had many defenders.

WHAT CIRCUMSTANCES MAY HAVE PROMPTED THE LAST CENTURY CLAIM THAT DRAKE REACHED THE LATITUDE OF 48°.

A short time before the middle of the last century certain important political events occurred in North America that led to changes of territory, and necessarily to the definition of the limits of boundaries on this coast.*

Texas had revolted from the Republic of Mexico, and the territorial claims of that government were assailed. There was a movement of restless American fur hunters invading her borders; and pioneers seeking homes were crossing the Rocky Mountains to the undefined region of Oregon. A United States exploring expedition had surveyed Puget Sound and Washington Sound and sent a party through the Willamet and Sacramento Valleys; exploring parties were dispatched to the unknown regions beyond the Rocky Mountains. At the same time the Hudson's Bay Company was occupying Puget Sound, the Columbia River, the Willamet Valley, and had pushed as far south as the Umpquah River.

The pioneers to Oregon occupied the Columbia River, and claimed the protection of the United States as being within the territory of the United States; although they had always been well treated by the factors and agents of the Hudson's Bay Company.

The British claimed that their territorial rights reached as far south as latitude 42°, to which parallel the United States had acquired the rights of Spain.

The recognition of the independence of Texas had developed a war fever in the Southern and Southwestern States, fanned by the advocates of the extension of slave territory. Great Britain and the United States had each a fleet in the Gulf of California ready to seize California.

The United States declared war against Mexico in May 1846, and when the army was marching upon the city of the Montezumas a proposed survey of the Puget Sound and Columbia River regions was frustrated by want of an appropriation.

Even before 1845 the northeastern boundary between Canada and the United States was in dispute and surveys were made to

**The Oregon Question Examined in relation to the Facts and the Law of Nations*, by Travers Twiss D. C. L., F. R. S. * * * London, 1846. One Vol. 8vo. 392 pages and map.

The History of Oregon and California, Robert Greenhow; Boston 1845. One Vol. 8vo.

draw the line of delimitation; and is even unsettled at this date, January 28th 1908. It sticks at Pope's Folly island in Passamaquoddy Bay.

In the early years of this feverish unrest between Great Britain, the United States and Mexico, there appeared two important publications bearing upon the subject of the boundaries between Great Britain and the United States in the Northwest. These publications exhibited ability and research, but each was marred by partisanship. For example, Mr. Robert Greenhow doubted certain parts of the narrative of Captain George Vancouver than whom no navigator has exhibited higher integrity and ability. We personally know the excellence of his work on the Northwest, and the truthfulness of his narrative. Mr. Greenhow also accepted as true the glaring fiction of the Greek pilot Apostolos Valerianus, known to us as Juan de Fuca.

On the other side Dr. Twiss labors diligently to disparage the narratives of Hakluyt and Camden, because they name 42° , as the highest latitude which Drake had reached at sea; and he neglects to quote Hondius and other authorities, friends of Drake, that referred to the same parallel.

Dr. Twiss takes much pains to belittle the work of Mr. Greenhow.

After more than fifty pages we learn explicitly why Dr. Twiss has undertaken his investigation. "The question of the northern limits of Drake's expedition has been rather fully entered into on this occasion, because it is apprehended that Drake's visit constituted a *discovery* of that portion of the coast which was to the north of the furthest headland which Ferrelo reached in 1543, whether that headland were Cape Mendocino, or Cape Blanco."

He then states Mr. Greenhow's position against the latitude of 48° ; condenses the authorities in favor of that latitude; and declares that as Hakluyt alone stood for 42° , and then for 43° , he must be discredited.

We now propose to follow the line of investigation taken by Dr. Twiss in tracing Drake along the northwest coast.

On page 22 he writes: "The Bull of Pope Alexander VI, as is well known, gave to Ferdinand and Isabella of Spain all the New World to the westward of a meridian line drawn a hundred miles west of the Azores. * * * Elizabeth expressly refused to acknowledge any title in the Spaniards by donations of the Bishop of

“ ‘Rome,’ ” * * * and refused to be bound by any claims that debarred English traffic with the Indies.

“In accordance with such a policy Sir Francis Drake obtained “through the interest of Sir Christopher Hatton, the vice-chamberlain to the Queen, her approval of an expedition projected by him “into the South Sea.” P. 23.

No authority is given for this far-reaching and doubtful statement. It involves the subject matter of a royal commission; and the Doughty tragedy is not referred to.

Drake “passed through the Straits of Magellan in the autumn of “1578, and ravaged the coast of Mexico in the spring of 1579.” P. 23. “Being afraid to return by the Strait of Magellan he sought a route “from the South Sea into the Atlantic by the reported Straits of “Anian.” P. 23.

Dr. Twiss, in his discussion does not propose to relate the details of Drake’s voyage. His main object is a question of boundary, and he refers to it on page 24. “It is a disputed point, whether Drake, “in his attempt to find a passage to the Atlantic by the north of “California, reached the latitude of 48° or 43° .” Whereupon he enters into a long criticism of Mr. Robert Greenhow’s statements concerning Hakluyt’s publication of “the Famous Voyage.” He discredits Greenhow and Hakluyt; pages 25–42. That discussion is clearly intended to cast doubt upon Hakluyt’s narrative in the matter of the latitude reached in the south and in the north Pacific; namely $55\frac{1}{3}^{\circ}$ to $57\frac{1}{3}^{\circ}$ south, and 42° to 43° north in the editions of 1589 and 1600.

The discussion leads Dr. Twiss to prefer the narrative of the “World Encompassed,” largely because it was written or compiled by the nephew of Drake; and particularly because it carried the *Golden Hinde* to 57° south, and to latitude 42° north on June 3d, and two degrees farther (44°) by June 5th when they ran into the land. But in another passage the writer of the above says: “That though “we searched the coast diligently even unto 48° found we not the “land to trend so much as one point in any place towards the East, “but rather running on continually north west, as if it went directly “into Asia”; page 45.

To sustain the landfall of 48° Dr. Twiss endeavors to show that the *Golden Hinde* would never have required twelve and a half days to reach the anchorage at $38^{\circ} 30'$ or 38° . He writes, page 46,

"There is no doubt about the port where Drake took shelter, at least within half a degree, that it was either the Port de la Bodega in $38^{\circ} 28'$, as some have with great reason supposed * * * or the Port de los Reyes situated between La Bodega and Port San Francisco in about 38° , as the Spaniards assert."

In this part of Dr. Twiss' argument he makes no reference to the anchorage of the *Golden Hinde* in "a bad bay" on the coast of Oregon, soon after the land was reached. Drake had to seek some refuge because the northwester was "so violent that he could not continue to beat against it"; page 46.

Dr. Twiss assumes that the wind continued with violence from June 2d to June 17th; and even supposes the *Golden Hinde* to "have been exposed to one of those severe winds termed *Northers* which in the early part of the summer bring down the atmosphere even at New Orleans and Mexico, to the temperature of winter."

That is an amazingly erroneous statement. We elsewhere refer to the authority from whom he borrowed it.

We have never learned how long the *Golden Hinde* was at anchor in Chetko Cove; but if she was caught there by one of our impenetrable, "most uile, thicke and stinking fogges" Drake would not have dared to weigh anchor until the weather cleared. We have remained two weeks in Humboldt Bay in a thick fog; and then have had clear, beautiful weather and light breezes northward to the Strait of Fuca; May-June 1853.

The fact is shown in the World Encompassed that Drake experienced somewhat similar conditions of wind and weather. "Euen in that height, [48° ?] when we had a franke wind to haue carried vs through had there beene a passage, [to the Atlantic,] yet we had a smooth and calme sea, with ordinary flowing and reflowing [of the tide?] which could not haue beene had there beene a frete; of which we rather infallibly concluded, then coniectured, that there was none." Pages 118-119.

The violent northwester had blown itself out, and the land breezes and smooth sea were favorable to Drake's search for a proper anchorage; and he certainly would not sail along the coast at night.

When Drake was on the South American coast the *Golden Hinde* was plying northward generally about a league from the land, while the Pinnace worked close along the shore. It is extremely probable that when seeking for a bay south of the landfall at forty-two,

during the time of calm and a smooth sea, that the Pinnacle followed the shore closely. That would have been the course of a prudent and anxious navigator. Thus the report would be adverse at Trinidad Head and at Bodega head. Humboldt entrance could not have been detected.

Dr. Twiss makes a special plea for the parallel of 48° , because one authority asserted they found the land stretching westward straight for Asia. It will be in order to discuss such a condition when Dr. Twiss can sail the *Golden Hinde* from latitude 42° to latitude 48° against a strong head wind and heavy swell. No navigator could admit the possibility. The introduction of the narrative of Stowe the antiquary, adds no weight to the claim of the higher latitude. His account was published three years after Hakluyt's. He writes that when Drake had "passed forth northward till he came to the "latitude of forty-seven thinking to haue come that way home, but "being constrained by fogs and cold winds to forsake his purpose "came backward to the line ward the tenth of June, 1579, and "stayed in the latitude of thirty-eight to grave and trim his ship "until the five-and-twenty of July." Page 48.

He also praises the Arctic navigator John Davis whose account is in Hakluyt's fourth volume; and quotes: "After Sir Francis Drake "was entered into the South Seas he coasted all the western shores "of America until he reached the septentrional latitude of forty- "eight degrees, being on the back side of Newfoundland." Page 49.

When Dr. Twiss gravely presents such statements as those of Stowe and Davis he presumes that his readers will not seek the originals. The quotation from Davis is not literal nor complete, but is disingenuous. We have given the full quotation in our account of Davis and have expressed our opinion of his dissertation. His statements have no weight, but the latitude of 48° has fascinated Dr. Twiss who even quibbles about the term "coasted."

He then brings Sir William Monson as a witness for the 48th degree in one of his tracts and in another C. Mendocino as "the fur- "thermost land discovered," and "the furthestmost known land." Page 50.

We have then the life of Drake by Samuel Johnson who in 1741 placed Drake in 38° and his anchorage in $38^{\circ} 30'$.

The narrative of the *Sutil y Mexicana*, and the researches of Alexander Humboldt are also brought forward to give aid and comfort to the advocate for the highest latitude.

This array of authorities is summed up as necessary to affect the claims of Great Britain against those of the United States to territory on the northwest coast, which we now know was settled mainly on the continental line of 49° of latitude while the western terminus was drawn through the Strait of Fuca north of forty-eight degrees.

We have followed Dr. Twiss so fully because, as we have before said, we believe that his work has been largely relied upon by later authorities to sustain the claim which was raised by the nephew of Drake to the higher latitude after nearly all the early narrators were dead.

In our view of the testimony the claim as presented by Dr. Twiss is untenable.

LATE AUTHORITIES WHO ASSERT FRANCIS DRAKE
REACHED THE LATITUDE OF 48° ON THE
NORTHWEST COAST; OR ANCHORED
IN THE BAY OF SAN FRANCISCO.

Within recent years several writers have asserted that Francis Drake reached the latitude of 48°, and even higher, on the Pacific Coast, and that the *Golden Hinde* anchored in the Bay of San Francisco.

We believe the people on this coast, and geographers in general have arrived at adverse judgments in both these cases.

No new evidence has been presented by the writers to substantiate their assertions, nevertheless we consider it a public duty to call attention to the weak points advanced by them, and try to settle the question.

We note the authorities before offering any criticism.

The first authority is James Anthony Froude who devotes one of his volumes to the reign of Queen Elizabeth; and in this part of the historical record he necessarily gives an account of Francis Drake's voyage of 1577-1580.

We put no faith in his statement that Drake "held on up the coast "for eight hundred miles into latitude 43° north"; and that "he ran "back to San Francisco."

Such statements with some show of competent authority in matters not involving the question at issue, are not worthy to be classed as historic; nevertheless we shall present his fuller account in order to exhibit the want of knowledge displayed in an interesting question of geography and history.

The second authority to which we shall refer is that of Clements R. Markham, for many years Secretary of the Royal Geographical Society of London, in his "Sea Fathers" 1884. In this history by a very prolific writer for whom we have the highest respect we are told that Drake discovered the northwest coast of America from latitude 40° to latitude 48°. He gives no authorities for this declaration, nevertheless we shall present what he has to say, and our criticisms later on.

The recent work of Julian S. Corbett in two volumes, "*Drake and the Tudor Navy*, with a history of the rise of England as a maritime

“power”* might fairly be designated a plea for the Idolatry of Plunder. It exhibits much research and is written in a very attractive style.

He undertakes to show that Drake reached the latitude of 48° in the Pacific on our coast. He offers no suggestion where Drake first anchored when he reached the coast.

He admits that his second anchorage was in the Drake's Bay of our charts, upon the authority we had presented.

“*The Silver Map of the World*, a contemporary medallion commemorative of Drake's great voyage (1577–80) * * * by Miller Christy * * * London * * * MDCCCC.” On the cover the title is “The Silver Map of Drake's Voyage 1577–1580”; and we shall use that appellation throughout.

Mr. Christy undertakes to prove that this medallion was really struck or engraved to commemorate Drake's achievement in that expedition.

This Silver Map has a broken line to represent Drake's course, with various legends thereon. This broken line reaches to nearly latitude 48° off the Pacific Coast, and Mr. Christy accepts that parallel without comment. Upon the southward course therefrom, he asserts that “Drake, in June 1579, entered what is now called the “Bay of San Francisco,” page 20. And that “on July (1579) “Drake left the Bay of San Francisco.”

In 1893 the President of the National Geographic Society, Washington, published his annual address in the April number of the Magazine of the Society. The following paragraph relates to Drake's movement on the northwest coast of the Pacific:

“He followed the coast from Central America northward to the “latitude of Vancouver [Island] and took possession of the land for “England, calling it New Albion; then finding the coast still trending “to the northwestward and the weather growing more and more “severe, he gave up his attempt, landed at the harbor of San Francisco, refitted his ships, and returned home by way of the Cape of “Good Hope,” etc.

It should be borne in mind that the ocean frontage of Vancouver Island extends two hundred and twenty geographic miles northwestward from latitude $48\frac{1}{2}^{\circ}$ to 51° . This is the highest latitude

**Drake and the Tudor Navy* * * * by Julian S. Corbett, 2 vols., Longmans, Green and Co., London, New York and Bombay, 1898.

ever claimed for Drake's limit, save the claim of J. G. Bartholomew, next referred to.

J. G. Bartholomew, the well known geographer of Edinburgh, has the following statment in his list of "The Explorers of the World"; "1577-80: Sir F. Drake (Eng.) Second circumnavigation of the "globe, and first saw Cape Horn. Explored W. coasts of N. America "nearly as far as Vancouver Archipelago"; but he has no name of that character in his map.*

The latest claim we have received in favor of the forty-eighth degree of latitude is Professor Walter Raleigh†, who declares, without a notice of authority, "that he sailed northward, almost to Vancouver's Island."

Professor Raleigh's mention of Drake on the North Pacific Coast is confined to less than one hundred words. He does not refer to the capture of the vessel from which Drake got the invaluable "Sea cards"; but after the capture of the treasure ship *Cacafuego*, writes: "Drake's ship was now heavy with precious metals, and the only "question was how to get her home. He sailed northward almost "to Vancouver's Island, but was deterred by the cold and fogs from "proceeding further. Turning to the south again, along the coast "of California, he put into a bay near San Francisco, repaired his "ship, and was solemnly crowned by the Indians as their king. He "named the district 'New Albion,' and nailed a sixpence to a great "post, leaving it, with the Queen's name inscribed above it, for the "Indians to worship. Then he struck across the Pacific, etc." Page 94.

To those who know the character of the natives the solemnity of crowning Drake is painfully absurd.

After this paper had been written circumstances conspired to demand a short note at the close referring to the Winsor-Hale claim that Drake anchored in the Bay of San Francisco.

We may merely mention another writer: John Harris D.D., who says on page 18 of his compilation: "June 5, having got into 43° of "north latitude * * * they made toward the land till they

*"The International Students Atlas of Modern Geography," * * London, no date, should be 1902.

†"The English Voyages of the Sixteenth Century by Walter Raleigh Professor of English Literature in the University of Oxford. Glasgow James MacLehose and Sons Publishers to the University 1906"—"First printed as introduction to Messrs MacLehose's Edition of "Hakluyt's Voyages, April 1905. Now revised and reissued separately, 1906." Page 94.

“came into 38° north latitude, under which Heighth of the Pole they
“found a very good Bay.”*

From this short enumeration it will be seen that several skilled writers within the last twenty-five years claim that Drake reached the parallel of 48 degrees or more, and that four of them have claimed he anchored in San Francisco Bay as we know it to-day.

Stranger still is the judgment of another authority. The Dictionary of National Biography discredits the descriptions of the climate given by the narratives, at the anchorage of Drake's Bay, within the eastern promontory of Point Reyes Head.

**A Complete Collection of Voyages and Travels*, consisting of above six hundred of the most Authentic Works * * * London, MDCCXLIV.

THE AUTHORITIES IN DETAIL.
DID DRAKE DISCOVER THE NORTHWEST COAST FROM
THE 40TH TO THE 48TH PARALLEL.

CLEMENTS R. MARKHAM.

The work of Mr. Markham is very disappointing.* With much material at his hand he has written a brief and not well proportioned account of Drake's career which was remarkable in many phases. It is unsatisfactory to the English reader, and particularly so to the student of geographic discovery and exploration on the northwest coast of America, because Drake's actions on this coast and through the Pacific to the Cape of Good Hope are condensed into thirteen lines of only one hundred and sixteen words. Page 112.

That is not history; it is not doing justice to Drake. His sailing the *Golden Hinde* of one hundred tons through twelve hundred leagues of an almost unknown ocean against winds and currents, with no consort, was an achievement that compels the admiration of every seaman and navigator. It was a bold and daring project, but its accomplishment is not hinted at. His landing and anchorages are not mentioned, and his sailing along our coast is an error; as well as the latitude he reached. Dates do not exist.

The whole life of this remarkable man is confined to pages 98-115.

In the earlier pages we find some references to the career of Drake as a slaver obtaining cargoes of negroes from the coast of Africa, and carrying them to the West Indies and the coast of Mexico to traffic with the Spanish settlers. In such a vile business we must expect recriminations at every scene of barter. The Spaniards were charged with cruelty, the English took revenge for Spanish offenses. When Capt. Cobham captured a Spanish ship off Bilboa he had the Spanish Captain, officers and crew sewed in a mainsail and then thrown overboard. No parallel case is charged against the Spaniards. The trade had been authorized by Carlos V and thus the "illicit traffic" may have been condoned.

We have the recital of the trade carried on by the *Jesus of Lubeck*, the Queen's vessel of 700 tons under John Hawkins, the *Minion* under Hampton, and the *Judith* of fifty tons commanded by Drake. How they were attacked by a Spanish fleet in the harbor of Vera

**The Sea Fathers*, a Series of Lives of Great Navigators of Former Times. By Clements R. Markham, C. B., F. R. S., Secretary of the Royal Geographical Society. * * * London, Paris, New York. 1884. One Vol., 7 $\frac{1}{2}$ x5 $\frac{1}{4}$; 221 pp. Portrait.

Cruz, and how many of the crew of the 700 tons ship were mostly abandoned by the *Minion* and *Judith*. On her retreat Drake landed one hundred of these men on a hostile coast. Only two were known to have escaped. Drake does not stand in a good light in this adventure. Page 100.

The later exploits of Drake were to execute revenge for what he and his friends called Spanish treachery, and they were in the same line of slavery with the higher excitement of plunder. To these maraudings Mr. Markham devotes a considerable part of his limited space; but we may not recount them.

The expedition of 1577-80 was fitted out with five vessels. At Port St. Julian we have the "deplorable matter of the trial and "execution of one of the leading gentlemen adventurers, Mr. Thomas "Doughty. The accused man was accomplished, a scholar and a "soldier, and possessed several good qualities. But he was actively "disseminating a discontented and mutinous feeling in the fleet, "which would have ended in the failure of the enterprise. He "received a fair trial, was found guilty of mutiny by a jury and "executed with all proper formality after receiving the sacrament "from Mr. Fletcher the Chaplain." Pages 108-9.

Mr. Markham does not refer to any Royal Commission from the Queen to justify Drake's assumption of the power of life and death; but refers to an old letter written by a Spaniard, who had been taken prisoner by Drake, to prove that Drake was a good friend of Thomas Doughty.

On the west coast of South America we have no information until Drake "plundered seventeen loaded ships at Callao." Page 111. Then the rich treasure ship *Cacajuego* captured off Cape San Francisco near the Equator. "A few days afterwards he overtook another ship laden with linen, silks and china dishes." From the owner, Don Francisco de Zarate, he took, among other riches a gold falcon with a large emerald. Mr. Markham says he has recently received a copy of Zarate's letter reporting the incident, and praising Drake for his bravery, ability and kindness. He therein describes the *Golden Hinde* as 400 tons burthen, thirty guns, and a hundred young brave men ready for battle. He states that Drake was accompanied by ten gentlemen of great families; his meals were served on silver plate to music, etc., etc.

This notable act of piracy is over shadowed by the special pleading

of Mr. Markham, who takes the occasion to declare that Drake "considered cargoes of Spanish ships as good prizes in retaliation "for Spanish seizures of English ships." "He did not rob from the "person like an ordinary pirate." P. 111.

One page is devoted to the Xarate incidents, and Mr. Markham has evidently overlooked the fact that Xarate was on the vessel which was captured off the Gulf of Fonseca with the King's orders to the governor of the Philippines, sea charts of the Indies, etc.

It is noted that in Mr. Markham's history the activities of Drake from the time he left Cape Horn to reaching Cape San Francisco, he "obtained supplies along the west coast of America, plundered "seventeen loaded Spanish ships at Callao" and then overtook the *Cacafuego*. P. 110-111. As a matter of fact Drake followed the coast line of South America so closely that he even used the pinnacle for inshore observation; but we find not a word about his committing picory at every landing and anchorage. It is astonishing that for more than forty-five hundred English miles no notice is taken of any place or event save the meagre notice of the stirring incidents at Callao and Cape San Francisco. Drake seized Spanish pilots and used their sea charts but no mention is made thereof.

After the capture of Xarate's vessel we find no reference to the course of the *Golden Hinde*. Not a hint that she was moored under the Island of Cano on the coast of Costa Rica and refitted, captured a passing trader, and experienced a submarine earthquake. Not a word about the inestimable value of the sea charts and official documents of the vessel, off the Gulf of Fonseca, bound for the Philippines. These charts opened the Pacific to Drake; he found the coast of Mexico and California laid down to latitude 43°; he learned of the weather in June, July, August and September; above all he saw the whole of the Indies laid down, and showing a route through them to the Cape of Good Hope.

There was the route to reach home free from Spanish interference; no need to try to find a northeastern passage around America where the Cabots, Cortereal and Frobisher had shown an ice closed ocean.

Without reference to dates the *Golden Hinde* was transported from Cape San Francisco to Guatulco on the southwest coast of Mexico, "to take in water and provisions," page 112, but no reference is made to his plundering the town and putting ashore the pilots he had carried.

All the narratives conjoin to giving credit to Drake for daring to make an attempt to reach home by the unknown and ice barred north coast of America; we have elsewhere expressed our disbelief of this idea; but none the less we appreciate the self-reliance and the audacity that guided the *Golden Hinde* through the Pacific to the coast of Oregon. It has commanded the admiration of every navigator; but Mr. Markham has condensed the history of this exploit and the return via the Cape of Good Hope into thirteen lines which we give in full:

"From Guatulco Drake proceeded northward, with the object of 'discovering a passage round the north coast of America to the Atlantic. He sailed up the Coast of California, calling the land 'New Albion,' as far as 48° N. latitude. Part of the California coast had already been visited by the Spaniard Juan Rodriguez 'Cabrillo in 1542, but from Cape Mendocino, in the 40th to the 48th parallel, the coast was discovered by Drake. He unwillingly gave up further attempts to make a north-east passage, and proceeded 'homewards by the Spice Islands, Java, and the Cape of Good Hope.

"On September the 26, 1780, the *Golden Hinde* once more anchored 'in Plymouth Sound.'

There is not a word upon the experience of the vessel and the crew on a new route of adventure, no reference to the weather, no description of the landfall, no anchorage near latitude 42°; no search southward for a harbor of refuge where the vessel might be refitted, not a word on the subject of the anchorage in latitude 38°, of the landing on the Southeast Farallon.

No reference to the landfall on the Asiatic side of the Pacific, nor of his track through the waters of the Indies; not a word of the hazardous position of the *Golden Hinde* on the hidden danger off the Celebes.

We have simply the single and erroneous statement that Drake discovered the coast of America from latitude 40° to latitude 48°; and that he sailed up the Coast of California.

We have said that Mr. Markham's history is not fairly proportioned; there are other examples than the above. The marauding expedition of 1585-86 is told in three lines; page 113. In another place one and a half pages are devoted to Oxenham's adventures, and the appearance of a white breasted bird at the bed of an Oxenham presaging death.

Mr. Markham declares that Drake was "an intrepid and successful discoverer" page 115; and further that he "should be an example "to all young men who are about to follow the noble profession."

In this review the claim of Mr. Markham that Drake reached the latitude of 48° on the northwest coast of America, can not be accepted.

THE GOLDEN HINDE AT 43° AND AT SAN FRANCISCO BAY.

JAMES ANTHONY FROUDE.

We must apologize for the introduction of the account of Mr. Froude who places the *Pelican* in latitude 43°, and that she anchored in the Bay of San Francisco.

There are so many errors in the recital of Drake's movements on the coast of America, and the authority has a certain claim to recognition, that we consider it a duty to exhibit errors which heighten the fascination of Drake's exploits upon the present generation.*

Mr. Froude's history of Drake's career in the 1577-80 expedition has all the lightness, inaccuracy and assurance of a modern newspaper article. There is an air of historic research by notes of reference to old authorities.

No intimation is made of the slave stealing voyages of Drake; but he would appear, from the narration to have been inspired to reach and raid the Pacific Coast of America mainly through the exploit of John Oxenham, a Devonshire rover who had crossed the isthmus of Panamá or the Darién, built a pinnace on the Gulf of Panamá, and made prizes of the coasters bringing bullion from Lima to Panamá. At the Pearl Islands he dallied with a Spanish lady, was caught, and hanged. Page 109.

In 1577 some person of weight had proposed to the Queen or her Council to fit an expedition to destroy the twenty-five thousand French and Spanish Catholic fishermen on the banks of Newfoundland; and as Drake was fitting out his fleet at that time, Froude hesitatingly intimates that Drake was the agent to do the work. At any rate in the same month, November 1577, Drake "had in readiness a fleet "of five armed ships equipped by a company of adventurers, among "whom the Queen and Leicester were the largest shareholders." Page 112.

On page 161, Froude describes the English pirates and smugglers of those days, who cared not for "creed or country," but robbed every trader they "could overtake—even in the Solent in Southampton water." Professor Raleigh calls them savages.

From page 395 we have what may be called the history of the expedition. In a note he refers to Camden, the annalist, who "relates

**History of England* from the Fall of Woolsey to the Defeat of the Spanish Armada. By James Anthony Froude, M. A., late Fellow of Exeter College, Oxford. Reign of Elizabeth. Vol. V. New York, Scribner's Sons; 1881. Vol. XI.

"no more than was told him by Drake himself," and then gives a written portrait of Drake's personality.

Overlooking the fact that Drake had access to charts and authorities Froude asserts that the squadron which Drake fitted out was to sail "through a chartless ocean to invade the dominions of the "King of Spain," page 396; overlooking the statement on page 408, that Drake showed the Captain of the *Cacafuego* "a chart of the world."*

Mr. Froude gives Captain Winter's statement of the tonnage of the *Pelican* at one hundred and twenty; and also that she "carried "twenty brass and iron guns * * with others as ballast in her "hold"; and "heavy stores of cartridges, wildfire, chainshot, guns, "pistols, bows and other weapons in great abundance." P. 396.

As part of the ship's company Drake "brought from London a puritan minister who could talk Spanish." P. 396.

Froude insinuates that Thomas Doughty was a traitor, in the service of some one in power at court; but that there is "no proof" of the suspicion.

Mendoza, the Spanish Minister to England is quoted as asserting that on the authority of Captain Winter, Drake himself was the executioner.†

Froude does not openly and manfully express his opinion of the legality of this tragedy.

Upon leaving the Port of Saint Julian the trials and perils of the voyage 'began because "no Englishman had, as yet, passed Magellan's Straits. * * There were no charts, no records of past experience"; page 401, forgetting that Drake was familiar with the voyage of Magallanes.

We need not follow his vague description of the storms Drake encountered: After Drake began his course of plunder, the author mentions the capture of the first treasure ship at Valparaiso; then

*The following passage quoted by Robert Burton in the *English Hero* would also indicate that Drake had Spanish charts in his possession. The ships had just gotten through the Magellan Strait, and were out on a smooth sea before a gale:

"September 6 [1578] they left these troublesome Islands, and entered the South Sea or "Mar del Zur, the General designing to have gone ashore at the Cape, and after Sermon, to "have left a perpetual Monument to the Queen," etc. Page 97, Twelfth Edition 1739.

The use of the name Mar del Zur is good evidence that Drake had Spanish charts. We have elsewhere indicated what charts were available for Drake's guidance.

†El Drake entendió ser la principal causa dello un gentil hombre ingles que iba en su nao, y le prendió y puso cargo, hacie jueces á los propios marineros, que le condenáron á muerte, y no queriendo ninguno darselo, fué el propio Drake el executor, costandole por sus manos la cabeza, y proseguió su viaje del estrecho."

of the plunder obtained at Tarapacá, and at Arica; the cutting adrift thirty ships at Callao; the pursuit of the *Cacafuego*, which had been "christened 'Our Lady of the Conception,'" and her capture "one degree to the north of the line, off Quito," p. 407.*

"The full value of the plunder taken in this ship was never accurately confessed. It remained a secret between Drake and the Queen." Page 407.

At the taking of this galleon, the number of people on the *Pelican* was eighty-five all told. P. 408.

Drake then continued his voyage "at his leisure towards the coast "of Mexico, intending to follow the shore until he found" a strait at the north similar to that of Magellan; but happened to meet another Spanish ship coming from China, and took the best of her freight. Page 410.

"Then needing fresh water he touched at the Spanish settlement "of Guatulco," plundered the town, landed Nunez da Silva and other prisoners. "Again sailing north the *Pelican* fell in with a Spanish "nobleman who was going out as governor of the Philippines." Page 410. This gentleman was detained a few hours.

These rambling and erroneous parts of the history have a climax to the author's lack of knowledge of the voyage in the next statement. "Running on till he had left the furthest Spanish station "far to the south he put into the Bay of Canoa in Lower California," page 411; there he remained one month, March 16th to April 16th repairing his ship and fitting her out for his homeward voyage.

Here Froude takes time to declare the consternation in Spain, and the excitement in England when the news of Drake's exploits reached Europe. Her Majesty's Council made confession to the Spanish Ambassador Mendoza, that "Drake was a private adventurer," who had "committed piracy" and the government was not responsible for his acts. P. 412.

"By the 16th of April 1579, the *Pelican* was once more in order, "and started on her northern course in search of the expected passage. She held on up the coast for eight hundred miles into latitude 43° North, but no signs appeared of an opening." Page 418.†

On account of the excessive cold experienced at this parallel Drake determined to abandon this attempt.

**Quito* is in the heart of the Andes, one hundred and twenty-five miles east southeast from Cape San Francisco, and 9,540 feet above the sea. The reference is unique.

†This course along the coast is about 2,900 geographic miles.

"In the ship going to the Philippines he had found a Portuguese "chart of the Indian Archipelago, and with the help of this and his "own skill he trusted to find his way"; by the route around the Cape of Good Hope. Page 418.

So "running back to San Francisco he landed and made acquaintance with the Indians there. * * The King, as the chief "was called, resigned crown and sceptre, and made over California "with its buried treasures to the use of her Majesty of England." Page 418.

"He remained long enough to discover the gold with which the "ground was teeming." Page 419.

Drake "ran back to San Francisco," as if the *Golden Hinde* had left it but a few days before; it comes as trippingly from the pen of this historian as the most trifling of incidents.

Froude has overlooked the fact that the name of the *Pelican* was changed at the eastern entrance to the Strait of Magellan to the *Golden Hinde*.

Of course we can give no weight to any of Froude's statements; but the recital has served our purpose. Such a dislocation of history and geography it would be difficult to find in any work professing to veracity. It demonstrates how the glamour of success distorts men's views, as does the mirage.

DRAKE PLACED IN LATITUDE 48°.

JULIAN S. CORBETT.

SOME OF THE CHARACTERISTICS OF DRAKE BY CORBETT, BARROW AND
OTHER WRITERS.

Mr. Corbett admits that the *Golden Hinde* anchored in Drake's Bay, the later Puerto de San Francisco of the Spanish Navigators, upon the evidence we had presented in our "Identification" paper, 1890.* See "Drake and the Tudor Navy," Vol. I, p. 307n.

The work of Mr. Corbett bears the fullest evidence that "it has been a labour of love, made pleasant by assistance and counsel from quarters almost too numerous to mention." It is full of details of the family of the principal actor, and of the minutest incidents of a remarkable career, especially when they enhance the glory of Drake.

Mr. Corbett does not treat the life and exploits of Drake from a judicial standpoint, nor with the historical spirit; and therefore we are compelled to criticise his judgments of the *Golden Hinde*† having reached the high latitude claimed for her. He contends for 48 degrees.

Those who have read the history of Drake, as given by his associates and contemporaries, will be astonished at the height of the column which Mr. Corbett has raised to his memory, after three hundred years have somewhat veiled the merciless atrocities laid to his charge, and never disproved.

Mr. Corbett tells why his work was written. "The romantic fascination of his career as a corsair and explorer began, it is true, very shortly after his death to overshadow his work as an admiral and a statesman, but in his own time this was not so; a principal object of the present work is to restore him to the position he once held as one of the great military figures of the Reformation:" page V.

Mr. Corbett thus treats Drake as a "Corsair and Explorer," and not as a pirate, or buccaneer (p. 280) like Oxenham, Morgan or Kidd. He might be a "heretic corsair" (p. 280) who impressed Don

*"Identification of Sir Francis Drake's Anchorage on the Coast of California in the year 1579." California Historical Society Publication, 1890. 8vo., 58 pp., 15 views and charts.

†The crest of Sir Christopher Hatton, the Queen's vice chamberlain, was "a Hinde Stantant or"; "*The Sea Fathers*," by Clement R. Markham, Cassell & Co., London, Paris and New York, 1884: page 109.

Juan de Anton as "a visitation from heaven," but those who sailed with him knew better. Whatever can be turned favorably for Drake receives special mention even to the "corsair's clemency" (p. 292) in his treatment of Anton from whose vessel, the *Cacafuego*, (the Glory of the South Sea,) he had taken 760,000 pesos (p. 291) covering "thirteen chests of pieces of eight, eighty pounds of gold, "and thirty-six tons of silver, besides jewels and plate."

Mr. Corbett appears to entertain some subtle distinction between a corsair and a pirate; evidently falling back upon the assumption that Drake bore the Queen's commission to plunder his enemies by sea and by land, when there was no war between Spain and England. Drake had no such commission. Even with that unproven condition the Imperial Dictionary quotes from Byron his ideas of a corsair:

"He left a *corsair's* name to other times
Linked with one virtue and a thousand crimes."

In plain English the corsair and the pirate are sea-robbers, plunderers, and freebooters; denounced to-day as such by all civilized governments. Their business necessarily included the crimes of murder and arson.

In Drake's day his contemporaries considered him "the master "thiefe of the Unknown World"; "a fortunate robber who only "rested when satiated with spoil."

The plundering expedition of 1577-80 was made up of "gentle-men and saylors", "a company of desperate banckwrouptes that "could not lyve in theyr contrye without the spoyle of that as "others had gotten by the swete of theyre browes"; "chamber cham-pions who * * lye on their feather beds till they go to sea."

"* * Our men will sweat
With carrying pearls and treasure on their backs."
"Th' adventurers a strong company are
Of merchants, * *
Which is a kind of trade piratical,
Do plough and harrow both by sea and land
Beyond the tropics, the bold Catholic King."

"The scourge of Spain."

Mr. Corbett does not clear up the case of Mr. Thomas Doughty. The Harleian and other manuscripts contain evidence enough to

condemn Drake for beheading Thomas Doughty, without a shadow of legal authority. Doughty had joined the expedition as Drake's "good and esteemed friend." He had been put in command of Nuno da Silva's ship, (which had been captured off the island of Santiago,) and had detected one of Drake's brothers in disobeying the General's orders. This Thomas Drake turned the charge against Doughty. After much unseemly discussion, and a trial by officers who feared Drake, Doughty was ordered to be hanged or shot; but preferred beheading.

In this trial Drake did not, and could not produce any commission or authority from Queen Elizabeth; and "it is more than probable "that, this gentleman's questioning the commission of Drake was "the reall cause of his Death." Drake could have put him in irons, or have sent him to England for trial; but he preferred to commit murder; and with consummate hypocrisy he partook of the Holy Sacrament before the Provost Marshal beheaded Doughty with an axe; on the 2nd July 1578; fifty-eight years after the tragedy of the Magallanes expedition at the same place.

"On this Island in porte S. Julyan * * Drake spewyed "oute agaynst Thomas Doughty all his venome, here he ended all "his conceyved hatred, not by curtesy or fryndly reconceylement, "but by moaste tyranical blud spillyng * * for here he murdered hym. * *"

Everything connected with the port of San Julian in those early days has some superstitious, weird or gruesome history. One of the unaccountable acts of Drake's men was the making of a "Tankard "from the Magellan Gibbet": Barrow, page 112.*

We find a different estimate of some of Drake's acts in a late authority,† although Mr. Barrow has written his book to give his countrymen a still higher estimate of the exploits of Drake; and of his "kindness and benevolence"; (p. 110). From him we learn that before Drake joined John Hawkins he "was in fact already ac-

*The fleet of Hernando Magallanes wintered in the Puerto de San Julian during April, May, June, July and August, 1520: the winter of that region.

In the dissensions and discontent that naturally arose, Don Luis de Mendoza was stabbed by the orders of Magallanes; Gaspar de Quesada was seized, hung and quartered, and Juan de Cartagena, with the French priest Pedro Sanchez de Reina were put ashore when the fleet left on the 24th of August.

Vide "*An Historical Collection of the Several Voyages and Discoveries in the South Pacific Ocean.*" * * Alexander Dalrymple, London; MDCCCLXX, 2 Vols. Vol. I, page 18 *et seq.*

†*The Life, Voyages, and Exploits of Admiral Sir Francis Drake, Knt.,* * * by John Barrow Esq. * * * John Murray, Albemarle Street. MDCCCXLIH.

"acquainted (to what extent we know not) with the West Indies and "the coast of the Caribbean Sea"; (page 8.) That he was well acquainted with the profits of the slave trade. That the Hawkins expedition of October 2, 1567 was a slave stealing and trading expedition, (page 9), with "the slaves as an outward-bound cargo," in exchange for silver and plunder; (pages 8, 13.) It was an unfortunate expedition; Drake escaped with the *Judith* and reached England, but we find no record thereof.*

According to Barrow, Dr. Johnson in his *Life of Drake* wholly overlooks the slavery phase in his hero's career. Yet slavery was glorified in those strenuous times. The trade of selling negroes to the Spaniards was "carried on by virtue of a treaty, still subsisting, "between Henry VIII and Charles V. So far was this traffic then "considered from being infamous, that every encouragement was "given to it by Queen Elizabeth, who took Hawkins into her service, "made him Paymaster of the Navy, and, to mark her sense of obligation and favour, gave him a coat of arms, 'whose crest was a " "demi-Moor properly coloured, bound by a cord' "; (pages 6-7.) And Drake "cheerfully joined Sir John Hawkins in his ventures to "the West Indies."

Barrow says: "Elizabeth was well disposed to encourage adventurers desirous of sharing in the riches extorted by Spain from the "unfortunate princes of Mexico and Peru and their native subjects"; pages 32-33. And in later years we are elsewhere told that the expedition of 1585 was paid for by "Sir Philip Sydney, the friend and "favorite of Queen Elizabeth."

In the matter of Thomas Doughty, Barrow says, page 77, that it is not "credible" that the Queen gave Drake a commission to make reprisals, as that "would have been equivalent to a declaration of "war." And again, on page 110, he writes of this affair, wherein there was no mutiny, and no associates or confederates; "still a "mystery hangs over the whole proceeding,—an irregular court "held,—a civilian criminally accused, but no crime specified,—no "charge produced,—no defence set up,—no evidence on either side,— "no proceedings put on record,—the prisoner condemned and executed by an unusual process,—and not a word said about it."

Mr. Barrow quotes from the certified copy of Francis Fletcher's

*"The same night the *Judith* likewise forsakes" the *Minion* the only ship Hawkins had left; 1567. Quoted by Barrow, page 20, from "Narrative of Miles Philips, in Hakluyt."

manuscript, page 104, which declares that Doughty utterly denied the charges "upon his salvation, at the hour of communicating the Sacrament of the body and blood of Christ, in the hour and moment of his death, affirming that he was innocent of such things whereof he was accused, judged, and suffered death for."

On page 105 he continues: "His gifts were very excellent for his age; a sweet orator, a pregnant philosopher, a good gift for the Greek tongue, and a reasonable taste of Hebrew. * * He feared God, loved his word", and confirmed himself "in the faith of Christ." He had been "a sufficient Secretary of a noble personage of great place." He had been "an approved soldier in Zeeland", and was "not behind many in the study of the law." On page 106, he was "a man of extraordinary endowments"; "a man of eminent abilities."

He had been chosen by Drake as second in command of this expedition; as befitting an able man and a good friend.

As a marked and very characteristic act of Drake he partook of the Holy Communion with this gentleman, whose name is never mentioned in the *World Encompassed*. In his letter to Captain John Winter of the *Elizabeth* he writes, "beseeching God the Saviour of all the world, to have us in his keeping to whome onely I give all honour, praise, and glory." Barrow, page 130.*

That is somewhat different language from what Drake used to Captain Winter, August 7th, on board the *Elizabeth* the day before they sailed from Port San Julian. He "swore very vehemently, I know not upon what occasion, that he would hang to the number of 30 in the fleet that had deserved it, and then again charged Worrall that his case was worse than Doughty's, and that by God's wounds he had deserved to be hanged. And, Master Winter, said he, where is your man Ulyses? By God's life, if he were my man, I would cut off his ears; Nay, by God's Wounds, I would hang him; but wherefore truly I do not know."†

*S. Weir Mitchell, LL. D., bases his drama of "*Francis Drake, a Tragedy of the Sea*," upon the assumed treason of Thomas Doughty who had pledged himself to my Lord Burleigh to wreck this enterprise; and that Francis Fletcher received the confession of such treachery, and revealed it to Drake who charged Doughty with treason to the Queen whose commission he bore.

Dr. Mitchell states that his authority is the *World Encompassed*, and he commends Doughty's choice of beheading, "as died the hurt Greek by a friendly sword." Page 58.

†A *New, Authentic and Complete Collection of Voyages round the World*, undertaken and performed by Royal Authority. London, Circa 1784; large Fol. p. 387, col. 2. See Bibliography.

When he was approaching Puerto San Julian one authority says; "On the 18th after prayers to God, with which Drake (for example's sake) never forgot to begin an enterprize, he put to sea, and the next day near Port Julian discovered their associates." Page 388.

Mr. Barrow, in 1843, speaks plainly of the absolute illegality of the beheading of Doughty; yet when Sir William Monson, an able navigator, of that period, fully cognisant of most of Drake's career, offers his judgment, Mr. Barrow grows hypercritical. He writes; "Monson seizes every occasion to say something ill-natured of Sir Francis Drake; even his death could not refrain this propensity"; page 409. A few pages before, he had quoted the judgment of Stowe an annalist of that epoch, (page 405,) upon Drake's imperfections, who stated them in a prominent arrangement as, "Ambitious for Honor; Unconstant in Amity; and greatly affected by popularity." That expression warrants the assertion that "Sir Francis Drake had 'an insatiable thirst after honour beyond all reason'; page 412.

Captain Burney,* 1803, does not speak disparagingly of Monson, but gives him credit for appreciating the great feat of Drake's circumnavigation.

He writes; "Among those who more censure his [Drake's] expedition he is praised [by Monson] 'for conducting it so discreetly, 'patiently, and resolutely'"; page 366. And further: "Sir William Monson, likewise, commends the resolution of Drake for having 'after almost two years spent in unpractised seas, left his known 'course, and ventured upon an unknown sea in 48°, to which 'latitude he arrived, thinking to find a passage into our Seas'"; page 343.†

Mr. Barrow again quotes Monson's opinions; "And yet he [Drake] 'must not go so clear without stain or blemish; for you must know, 'that though he deserved well in the direction and courage of his 'journey, yet the ground of his enterprise was unjust, wicked, and 'unlawful, his design being to steal, and thereby disturb the peace 'of princes, to rob the poor traveller, to shed the blood of the innocent, and to make wives widows, and children fatherless;" pages 417, 418.

Neither does Mr. Corbett condemn the putting ashore of the Porto-

*Served with Captain James Cook on his last two voyages.

†When Drake was beating northward "for more than two months he traversed unknown and trackless waters with a self-reliance and a fearlessness that challenges the admiration of the seaman." Identification paper, page 9.

guese pilot Nuno da Silva at Guatulco, Mexico, among his enemies a prisoner who had served them so well, because the harsh charges against Drake for this piece of heartlessness are so contrary to his usual behavior; page 233.* The leaving of the young negress of fifteen years, "a Pper negro wench,"† who was with child to Drake or his officers, and one or two negroes whom he had also brought from the coast of Central America, and marooned on one of the Moluccas, is smoothed over by the unchristian assertion that the life before them promised "perfect bliss." Mr. Corbett did not hear their cries of despair as they saw the vessel leave them; nor does he quote the authority that pronounced the act as "the relentless cruelty of minds addicted to rapine and lust."

After the Spanish Armada Drake's contemporaries did not express the same sentiments of his worth and magnanimity as Mr. Corbett.

"All vantages of time and power Drake takes
To reap the fruits of our most valiant deeds.
This rebel, object of wrath and subject of revenges,
Base rascal, bad, and hated of his kind,
Hath wrought his country's wreck for his own ends."

Drake was no novice in unlawful acts at sea. He had been in the West Indies and the Caribbean Sea in 1565-66 with Capt. John Lovell and speaks of his wrongs‡ in the preface to the Third Voyage, revised; with Sir John Hawkins in 1567-68 via the coast of Guinea whence they took three hundred and fifty slaves to sell to the Spaniards in the West Indies and the mainland. Again he went through the same routine in the *Dragon* and *Swanne* in 1570; with the *Swanne* alone in 1571. The expeditions were disastrous and the acts of the Spaniards were considered treacherous and unjust. That may be considered the logical view of the robber; hence Drake's determination to be revenged by more forceful means.

These peccadilloes of Francis Drake are rarely mentioned.

Nor was Drake a "discoverer" or "explorer."

He had organized and fitted out his vessels for plunder only: the plunder of treasure ships, of towns, estates, individuals, and the

*The original name of Silva's vessel we can not find. She was "from Santa Maria," a port of Portugal according to Hakluyt, Vol. III, page 736; and was named the *Mary* by Drake.

†From the ship in which was the Spaniard Xarate.

‡"Wrongs received at *Rio da Hacha* with Captain *John Lovell* in the years 1565 and 66; having been grievously indamaged at *St. John de Ulloa* in the Bay of Mexico with *Captaine John Hawkins* in the years 1567 and 68."

Altars of the Churches. He plundered enough gold and silver to ballast his vessel of one hundred tons.*

Burney writes, (Part I, page 334,) "These seizures are related in 'the world encompassed in a style of exulting jocularity'; an expression far too weak to express one's disgust at such flippancy.

He made no explorations; he sailed by sea-charts that he had gotten from the galleons and pilots captured on the American coast; he needed to take no risks.

He was no discoverer and certainly no explorer in any legitimate use of the words; whatever he did discover arose from the force of adverse circumstances in his coming upon the Pacific: he was the first to see Cape Horn† and the first to anchor in the "bad bay" of Chetko Cove in latitude 42° 03'; and the first to anchor in the bay now known by his name, in latitude 38°, within twenty-five nautical miles of the Heads of the Golden Gate; he first mentioned the groups of the Farallones. In the sea of the Celebes he found a sunken rock upon which the *Golden Hinde* was nearly lost, and where he lost his self-reliance and called all hands to prayers.

Burney quotes from Sir William Monson: "The purposes of Discovery, or the advancement of Science; were not among the motives of his voyage"; page 366.

Twenty years before Burney wrote his *History of Discoveries in the South Sea*, Mr. George William Anderson wrote:

"To dignify actions, therefore, of the most infamous piracy with 'the name of great, is to exalt vice, and to substitute villainy in the 'place of substantial virtue. * * *

"The only two enterprizes in which he was employed in a joint command, he ruined by perfidy and self-conceit."‡

After three centuries, when the wicked deeds of some unusually daring man have been mellowed and toned down, and the glamour of success clouds the eyes of justice, Mr. Corbett condones all his excesses, and presents for the worship and adoration of the world the Apotheosis of Francis Drake the Scourge of Spain.

We need quote but a few words from Mr. Corbett's preface to exhibit his estimate of Drake's mental and moral equipment.

"Not only was Drake intimately connected in all the various 'phases of his life, with every aspect of the Elizabethan maritime

**The World Encompassed*, p. 182; appendix III.

†October 28th 1578.

‡*A New, Authentic and Complete Collection of Voyages* * * *, 1784, p. 398, col. 1.

“upheaval, but throughout Europe he was recognized and applauded, even in his lifetime, as the personification of the new political force. Nor has recent research disclosed any reason for reversing the verdict of his contemporaries.” * * *

“Great as was the part he played as the moving spirit of the English maritime power, the significance of his career as a corsair must not be minimised. * * *

“It is in his career as admiral and administrator that he stands alone as the creator and inspiration of a force that was new to the world.” And the second volume is taken up with this latter phase of Drake’s accomplishments.

Against the judgment of Mr. Corbett we quote one of the old writers:

“Though Drake was bold, he was not honest; that though he did not kill those he plundered and had no motive to destroy, he spared none who opposed his designs, or who did not pay implicit obedience to his arbitrary will; that, though he was an able seaman, he was a jealous rival; and that, though he was a gallant leader, he was a most tyrannical Commander.”

Of his own vessels that had separated from him he warned “them take hede * * yf I fynd them in my way I will surely synke them.”

At Carthagera the ransom money of one hundred and ten thousand ducats was judged sufficient, “inasmuch as we have taken our full pleasure, both in the uttermost sacking and spoiling of all their household goods and merchandise, as also in that we have consumed and ruined a great part of their town with fire.” A thousand crowns were demanded as ransom of the priory or abbey. Barrow, page 202.

On the question of honesty, the plunder of the *Golden Hinde* was believed to have been £800,000, of which £80,000 was divided among the “adventurers”; “merchants of London, his partners and fellow adventurers, * * * at the rate of £47 for £1 invested.” Quoted by Barrow, page 177, from the “Merchant’s Mappe of Commerce, 1638” by Lewes Roberts.

Of his tyrannical character we have it exemplified in the case of Francis Fletcher the chaplain, “Minister of Christ and Preacher of the Gospel,” when the *Golden Hinde* was on the sunken rock in 2° south latitude, between Celebes and Borneo. He had denounced

the captain as one "whose crimes of murder and lust had brought down divine vengeance on all." When guns and rich cargo had been thrown overboard and the vessel was in the most perilous position; and Drake, the gentlemen adventurers and the common sailors had lost their courage and bravado; recrimination and upbraiding arose and threatened mutiny. The daring leader ordered prayers, "and every thief reconciled himself to his fellow-thief and "Fletcher administered the sacrament to them all." A favorable change of wind relieved the vessel and she floated into deep water. No wonder that Drake hated Fletcher; he excommunicated him and denounced him "to the divell and all his angells", took sweeter revenge by chaining him by one leg to a staple driven into the hatch near the forecastle, and gloated over the defenceless man.

Mr. Anderson refers to Drake in this emergency as follows:

"Here the intrepidity of Drake was shaken and his dexterity baffled; here all the horrors of mind, attendant on conscious guilt, concurred to aggravate the distress of those who were instrumental in abandoning the harmless slaves. * * Mr. Fletcher, the chaplain exclaimed against the Captain, as one whose crimes of murder and lust had brought down divine vengeance on all the company." Page 394, col. 1.

We have given these few extracts to indicate that the judgment of Mr. Corbett has been influenced by his worship of a rover of the ocean who lived by plundering at sea and on land, and who died ingloriously and was dropped to the depths of the sea in a leaden coffin at Porto Bello in 1596, the scene of his last discomfiture as a freebooter.*

In referring thus incidentally to the burial of Drake it is noticeable that his comrades did not carry his body to England. Why?

Until Mr. Corbett shall produce better evidence in this history we must reject his judgment; and fortify our position by further proofs.

The latest writer who can not find fitting words to express the greatness of Francis Drake, is Professor Walter Raleigh, elsewhere quoted. And necessarily he condones his weakness in the questions of slave trading and piracy. He devotes about thirty pages to Drake's career; beginning with his first slave trading venture as second to his cousin John Hawkins.

*Dampier, in one of his peculiar ventures on the northern coast of Central America in 1681, wrote: "We past by *Scuda*, a small Island (where 'tis said *Sir Francis Drake's* bowels 'were bury'd) and came to a small River to the Westward of *Chagre*." Volume I, page 39.

He remarks that in the decade about 1560-1570 the English naval power "startled Europe", and the causes seem "so inadequate that "it is difficult to put off the language of miracle. Fuller invokes a "special Providence"; pages 57-58.

Yet he is compelled to admit that "the great deeds of Elizabeth's "reign were most of them unlawfully begotten, and were legitimated "when they came of age"; page 67. He quotes Hakluyt writing in 1584, that "we and the French are most infamous for our out-"rageous, common, and daily piracies"; page 56.

He commences his description of the exploits of Drake by giving an account of the slave traffic carried on by John Hawkins between Africa and Brazil; the West Indies and the Spanish Main.

In 1562 Hawkins had gained "an enormous return of valuable "merchandise" for the sale of three hundred negroes seized at Sierra Leone. The Queen contributed two ships for this expedition. Again, in 1564, another slave stealing and trading voyage was made with similar success. One of the five vessels was furnished by the Queen. Then in 1567 Drake went with Hawkins on the third slave stealing voyage. They did not purchase their cargoes of slaves; on the African coast they seized and plundered several Portuguese slave ships which gave the expedition a "piratical complexion." The sequel of this undertaking was disastrous; only two ships reached home; and Drake in the *Judith* would appear to have deserted Hawkins in the *Minion*, one of the Queen's ships. Hawkins landed one hundred of his men on the Mexican coast; they are said to have volunteered to such unusual action in a hostile country.

Of this voyage Raleigh says: "it baptized with fire the greatest "fighting sailor of the age, Francis Drake." Page 75.

In 1570 Drake was back on the "Spanish Main, where he robbed "several barks of their merchandyse." Page 81.

In 1571 he captured a Spanish ship in the harbor of Carthagena.

In 1572 with two ships he seized Nombre de Dios, where he was wounded, and could not get the treasure stored there. He failed to reach Panamá, or to secure the treasure train thence to Nombre de Dios.

Professor Raleigh regrets that Hakluyt does not enter into the details of these slave trading and piratical expeditions of Drake. "Hakluyt, who was willing enough to memorise deeds of war, shows "a certain tenderness of conscience with regard to sheer piracy."

Page 83. "Yet the greatness of Drake is perhaps best seen in these "early buccaneerings." Page 84.

"Drake is an adept at dealing with men * * * and carries "himself in the pirate's profession with a courtesy, magnanimity, "and unfailing humanity that gives to his story the glamour of romance." Page 84. This "humanity" is seen in his treatment of Thomas Doughty "a gentleman of good parts," which Raleigh seems to commend. "Drake, after receiving the sacrament with "the prisoner, and dining with him by way of farewell executed the "sentence with his own hand"; page 87. Other authority declares Doughty was beheaded by the Provost Marshal.

Of this execution Raleigh says: "The rights and wrongs of this "dark business are beyond our recovery"; page 87. "It is highly "unlikely that he [Drake] had any such commission in writing." P. 92.

There were other men than Hakluyt in England who had some sense of the new commandment "do unto others as you would they "should do unto you"; and Raleigh is obliged to admit that "the "thing that troubled him [Drake] most, we are told, was that some "of the chief men at Court refused to accept the gold which he offered them, as gotten by piracy. Nevertheless the common sort "of people admired and highly commended him." Page 95.

When Hawkins and Drake went out, in 1595, with twenty-seven sail and two thousand land forces, Drake was already in disgrace, notwithstanding his share in the destruction of the Invincible Armada of 1588; and this venture was to retrieve his standing. Raleigh refers to this as being "twenty-eight years after their fateful "adventure in slave trading." Page 100. But this last expedition was a tragedy in lives, disaster and total failure; and Drake died on the morning of January 28, 1596, and was buried in the sea off Puerto Bello. Page 103.

When one studies the history of Spain and England in those times of English slave traders and pirates who sacked the towns of the Spanish colonies on the Atlantic and the Pacific, when no war existed it is easy to comprehend why Spain undertook the invasion of England in 1588. Monson says that Drake's proposition for the expeditions preceding that date, should have been "declined" because they rather awakened than weakened the King of Spain.

THE SILVER MAP OF THE WORLD.

THE TRACK OF THE GOLDEN HINDE AROUND THE WORLD. PLACED
IN SAN FRANCISCO BAY.

MILLER CHRISTY.

One of the latest writers who has undertaken to fix the northern limit of Drake's appearance on the northwest coast of America at latitude 48° , is Mr. Miller Christy; who also locates Drake's second anchorage in the Bay of San Francisco.*

Mr. Christy devotes the first twenty-one pages to the "examination of a very rare and interesting medallion" which he designates "The Silver Map of the World," and endeavors to prove that it was executed to commemorate Drake's voyage to the South Sea. He then takes up the description, (page 36,) to try to find a clew for the date, and the name of the engraver, (pages 37-45).

In his investigation he decides that Drake reached the latitude of 48° on this coast and that he refitted the *Golden Hinde* in the present Bay of San Francisco.

For its size the Silver Map is a remarkably good exhibit of geographic knowledge of the outlines of the Earth's surface as known at the closing of the sixteenth century.

"There are only three 'copies' or examples of it known to exist 'each of them being identically the same in all but the most trivial 'respects': (page 1.)

Each consists of a thin circular silver plate 70 millimetres in diameter, (2.75 inches) of uniform thickness in all parts, without a thickened rim; the thickness is not mentioned. One specimen weighs 424 grains, another 260 grains, and the third 300.6 grains.

From the data given, and the known weight of a cubic inch of silver, the plate weighing 424 grains is about 0.7 millimetres in thickness; that weighing 260 grains is 0.44 mm.; and that weighing 300.6 grains is 0.51 mm. or 0.02 inch in thickness.

The photograph which forms the frontispiece of the "Silver Map" was taken from the original in the British Museum, which Mr. Christy consulted. Corbett in "Drake and the Tudor Navy", Vol. I, page 272, gives an engraving of the southern part of South America

**The Silver Map of the World*, a Contemporary Medallion Commemorative of Drake's Great Voyage (1577-80) * * * by Miller Christy * * * London, Henry Stevens, Son, & Stiles * * * MDCCCC. Small 8vo: 72 pp. with index and seven other contemporary charts.

from latitude 40° south, enlarged and embracing Cape Horn. His foot note says it is "from a contemporary Dutch silver plaque in the "British Museum, showing Tierra del Fuego as a group of Islands "in the open sea." It has Drake's names and legends, but not the track of Drake. He does not suggest any date, or engraver, or nationality, or purpose for the execution of the plaque. Mr. Christy quotes differently in his foot note page 45.

We note the following conditions on this Silver Map: The two hemispheres are on a stereographic projection on the plane of a meridian. The eastern hemisphere contains Europe, Asia, Africa, and the Netherlands Indies; so there is but little of the North Atlantic and Pacific Oceans thereon. The western hemisphere embraces North and South America with nearly all the Pacific Ocean, north and south. The engraver certainly had a special reason for this apportionment.

The "Terra Australis Nvndvm cognita" occupies the southern one-third of each hemisphere. On the eastern hemisphere the prime meridian is evidently Ferro Island and the longitudes are reckoned and numbered on the Antarctic Circle eastwardly by ten degree meridians divided in half at the equator. This prime meridian is the western limit of the hemisphere. The western hemisphere therefore contains North and South America, and nearly all the Pacific, and the meridians 190 and 200 only are numbered. The parallels of latitude are given for each ten degrees, and subdivided to single degrees on the circumference, where they are of no use.

"The plate bears no inscription or indication of any kind showing "the name of the maker or the date when it was made"; (page 2.) Nor is there any proof that it was prepared in commemoration of Drake's return from his famous voyage.

This paper by Mr. Christy is based solely upon the assumption that the Silver Map was made for the purpose he has indicated. The only suggestion for such a hypothesis is that it has part of the track of Drake represented by a dotted line, and that no other track is laid down; (page 14.) That of course is a marked feature and the track is also accompanied by seven legends, from the time of Drake leaving England to the time of his return.

We shall show that there is more than that specified track.

Mr. Christy writes, that "the map is evidently the work of some "Master of the Art of Cartography; while the geographical infor-

"mation it conveys will be found thoroughly accurate, so far as it "could be at the time"; (page 8.)

Nevertheless the cartography is faulty.

The engraver does not locate the fleet at "Port St. Julian in 49 "Degrees, 30 Minutes" South where the unpardonable Doughty tragedy was enacted; nor does he lay down any course to place Drake off Cape Horn which he discovered.* On the Pacific he places the *Golden Hinde* at Mucho, in latitude 40° south, but not at Valparaiso in 33½° south where Drake followed the coast closely in the pinnace, trusting to find the *Elizabeth*, Captain John Winter. From Callao, the Port of Lima, the engraver keeps the track of the vessel far out to sea, and even without any reference to Cape San Francisco. The *Golden Hinde* had closely followed the coast on the lookout for her consort and for plunder. She crossed the Bay of Panamá and coasted along Central America. She was at Drake River just east of the Island of Caño on the coast of Costa Rica, where Drake cleaned and refitted his ship, experienced a violent sea or earthquake, and captured a Spanish vessel; was near the Gulf of Fonseca† where he seized an invaluable prize; was at Port Vale on the Balsam coast; and reached the small harbor of Guatulco on the coast of Mexico which he left for his long voyage to the northwestward. The cartographer ignores those important places and does not even lay down his track to the two anchorages on the coasts of Oregon and California.

On the other hand when the *Golden Hinde* was far out in the Pacific "seeking a wind," the engraver shows a course close along the peninsula of Lower California‡ from Cape San Lucas, in latitude 22° 52', to latitude forty-eight near Vancouver Island. He fails to locate the track through the Moluccas; and he has introduced a great south polar continent. He was negligent of important dates

*This discovery was the result of adverse weather. After passing the Strait of Magellan on the sixth of September, and when bound to the northwestward the vessels encountered a violent storm which drove them to the southeastward. The *Marygold* foundered, and the *Elizabeth* was lost to sight, and returned to England. The *Golden Hinde* was driven to 55½° or 57½° south, and Nuno da Silua says she anchored in the "haven of an Island" in twenty fathoms of water; (World Encompassed). Drake observed the Moon three-quarters eclipsed September 15th.

†Squier makes a mistake in locating Drake inside of the Gulf of Fonseca. He says "Drake had his headquarters on the island of Tigre, during his operations in the Pacific." Again "this island was the headquarters and dépôt of Drake and other piratical adventurers." * * *

Nicaragua; its People, Scenery and Monuments; and the proposed Interoceanic Canal * * * by E. G. Squier. * * New York MDCCCLII, see pages 168, 243, Volume II.

‡Which he names California.

when Drake, from 1580 to 1585, was near in person to have given them correctly.

The cartographer of the Silver Map was ignorant of dates that affected the accuracy of his operations: his first error is in the date of the discovery of the region named Bacallaos by John Cabot, 1490 instead of 1497; at the western entrance to Magellan Strait, 1579 for 1578; and at New Albion, discovered in 1580 instead of 1579.

There is a gross geographic error in the location of the island "Cazones" which is placed in latitude 36° at a distance of ten degrees of longitude off the coast of California. There is no such island, and we suspect it represents the high, large, western islands of the Santa Barbara channel, lying in latitude 34° , but under the Santa Inez mountains to the north.

Before going further we follow Mr. Christy's description of this part of the voyage. "Drake continued sailing northward searching for a passage leading eastward from the Pacific to the Atlantic until he met with high contrary winds and severe cold, when he decided, with the consent of all on board, to relinquish this project, and to return home round the World by way of the Moluccas and the Cape of Good Hope. * * * Page 19.

"The dotted line on the map makes it appear that he had reached the latitude of about 48° N. before thus turning back. * * * (page 20.)

"The fact that Drake at one time contemplated searching (albeit backwards, as one may say,) for a North-West Passage round the north of North America has almost escaped the notice of recent historical and geographical writers;" * * * (page 20.)

"Coasting next southward in order to find a harbour in which to refit his ship for the voyage across the Pacific, Drake, in June 1579, entered what is now called the Bay of San Francisco. There he remained several weeks [thirty-seven days,] taking possession, in the Queen's name, of the adjacent country which he called Nova Albion. It is now known that the Spaniards had been there previously, but Drake imagined himself to be the discoverer of the country, to which belief the fifth of the eight legends on the Silver Map bears testimony: NOVA ALBION ab Anglie 1580 inuenta: * * * " (page 20.)

"On July 23rd (1579), Drake left the Bay of San Francisco:" (page 21.)

We note exceptions to some of Mr. Christy's statements.

Drake did not sail northward searching for a passage to the Atlantic. He left Guatulco on the coast of Mexico, and sailed westwardly "five hundred leagues of longitude to find a wind." It has not been forgotten in America that he proposed "the discovery of "what passage there was to be found about the Northerne parts of "America, from the South Sea, into our owne Ocean" lest the Spaniards should lie in wait for the *Golden Hinde* at the Magellan Strait, which they did. We believe the declaration to make such a wild attempt to seek for a northwest passage was as misleading as his shipping the men of this expedition for service at Alexandria. He knew nothing of the continental coast northward of 43°. He had learned from his friend Frobisher, who had reached England from his second expedition, three months before he sailed, that the northeast part of the continent was impenetrable on account of ice. He was simply playing false to his fellow adventurers.

The Spanish charts which Drake had captured showed the western coast perhaps a little farther north than 43½°. Far better, they gave him the cartography of the Ladrones, the Philippines, and the archipelago of the Dutch East Indies. The Pacific route and the Cape of Good Hope were open and free, and in the temperate region. He was too good a navigator to risk any unknown route. He was not making discoveries; he was not risking the loss of his plunder.

Further, the Spanish had been along this coast; their galleons had made the landfall north of Cape Mendocino, and thence followed the coast southeasterly to Mexico.*

It is barely possible the galleons may have been at Drake's Bay before the *San Augustin* under Cermeño was wrecked in that vicinity in 1595, and where Vizcaíno anchored the *San Diego* in January 1603. When Drake was conning the coast southward of latitude 42°, he could not miss the protection of Point Reyes Head for an anchorage in which to refit his ship.

Neither galleon nor vessels of discovery could have seen the Golden Gate from the Farallones nor from Punta de los Reyes. It was a physical impossibility.

The southern part of the Bay of San Francisco was first seen by

*In 1585 the Viceroy of Nueva España, aware of the exploit of Drake, addressed a letter to the King of Spain in relation to a survey or reconnaissance of the coast of California. The King had already been advised that the returning galleons kept in sight of the land for seven hundred leagues before reaching Acapulco.

the Portolá expedition of 1769; the entrance was seen in 1772 from the Berkeley shore; examined from Pt. Lobos in 1774; was avoided by Perez in the same year when he was afraid to come inside the Farallones. In 1774 Father Paloú planted the Holy Cross on Point Lobos "where no christian had ever before placed his foot"; and in 1775 the *San Carlos*, alias the *Toyson de Oro* or *Golden Fleece*, was the first ship to enter the Golden Gate.

In our Identification paper we have shown the improbability of Drake having seen the Bay of San Francisco.

THE DRAKE LEGENDS ON THE SILVER MAP OF THE WORLD, AND THE
HONDIUS MAP OF 1595 (?).

Mr. Christy states there are eight legends on the map, but he does not name them consecutively, so we propose to give them in the order of Drake's progress.

The first legend we find upon the track of his vessel is between England and the northwest coast of Africa; (1.) "*Draci Exitus*", the outgoing of Drake; between Plymouth and the Canaries. (2.) Off the coast of Brasilia from latitude 10° north to 30° south, "*D. F. Dra Excitus anno 1577 id. Dece;*" the outgoing of D[ominus] F[ranciscus] Dra[cus] in the ides of December in the year 1577; that is December 13th.* There is an outward bound ship at the northern end of that part of the course. (3.) After passing the Fretum Magellanus there is the legend, "*In R. Elisabetæ 1579 ab Anglis;*" that is, passed by the English in 1579 in the reign of Queen Elizabeth. The date should be 1578, and Drake's name is omitted. (4.) A ship bound northwestwardly off the Gulf of California. (5.) On the mainland of our Pacific Coast between latitudes forty and fifty degrees north is the legend "*Nova Albion ab Anglie [Anglis] 1580 inuenta*"; New Albion discovered by the English in 1580, which date should be 1579; and Drake's name does not appear.

There is a track but no legend across the Pacific Ocean, no track through the Netherlands Indies; a track through the Indian Ocean to the Cape of Good Hope, but no legend.

(6.) On the west side of that cape is the legend in a single word "*Reditus*"; homeward bound. (7.) Thence the course is laid down northwestwardly, and passes three hundred miles northeast of the island of "S. Elena" with a full rigged ship on that line. We submit that the ship represents the seventh legend.

*Drake was not knighted until April 4, 1581.

The *Golden Hinde* watered at the coast of SIERRA LEONA, but the track makes no detour thereto.

(8.) The last legend on his course is after the ship had crossed the Tropic of Cancer in the Atlantic steering north and then northeast for home; and recites, "*Reditus anno 1580. 4. Cal. Octobrei*"; that is, returned in the year 1580 on the fourth of the Kalends of October. That is September 26th. We can not decipher the eighth legend in the copy before us and therefore have given it from Mr. Christy's text.

The authorities at hand are mainly for this date of Drake's arrival at Plymouth and it may be of interest to make a note of them.

The "World Encompassed" says they arrived "on the 26 of *Sept.*" (which was Monday in the iust and ordinary reckoning of those "that had stayed at home in one place or countrie, but in our computation was the Lord's day or Sunday) we safely with joyfull "minds and thankfull hearts to God, arrived at *Plimoth.*"

In the same volume, Appendix V, II part, page 252, the statement is "We arrived in *England* the third of November 1580, being the "third year of our departure."

The Hondius Map of 1595 (?) states that Drake "in Angliam redijt 27 Septemb̃is 1580."

In the "English Hero: or Sir Francis Drake Reviv'd," twelfth edition 1739, based evidently upon the *World Encompassed*, the compiler writes: "upon Monday *Sept.* 16, 1580 (according to the "Computation of those in England, tho' by passing so many different "Climates they counted it to be Sunday, having lost one day) they "with joyful Minds and thankful Hearts to the Almighty arrived "safely at Plymouth"; (page 150.)

In a large folio volume of Cook's voyages there are given the voyages of several other great English circumnavigators; and among them that of Drake. On page 394, column 2, we find the compiler's statement, "on the 11th of September they made the island of Ferara, "and, on the third of November, they entered the harbour of Plymouth." The date of this compilation is about 1784; author not named, editor George William Anderson Esq. Burney in his account of this voyage, says "on the 26th of September, they anchored safe "at Plymouth." Part I, page 364.

Dr. R. T. Crawford of the Observatory of the University of Cali-

fornia writes us that the 26th of September 1580 was Monday, according to the Julian Calendar.

These are the legends that in any way relate to Drake on the Silver Map; nevertheless Mr. Christy introduces two others which indicate English and Portuguese discoveries on the northeast coast of America about that period. The first is "*Meta incognita inuenta ab Anglis* "1576", located under the Arctic Circle, without any coast line under it. This relates to Frobisher's discoveries in his attempt to find a northwest passage to the Pacific. The second is "*Bacallaos ab * * ** "1490"; for 1497 and refers to the discoveries of the Cabots, and the Portuguese. This legend is on the land of Labrador. On page 12*n* Mr. Christy suggests that this name is "probably Farallones." On page 13 he writes: "this name (which is of somewhat uncertain "origin and vague application) was applied generally to the region "discovered by John Cabot in 1497." The name is the plural of the Spanish word Bacalao: in the English-Portuguese dictionary we find "Codfish, o peixe chamado bacalhão"; i. e. the fish called bacalhão. We shall refer to this later.

Besides the lines and the names of the tropics and the eight legends, there are one hundred and ten geographic names: sixty-eight in the eastern hemisphere, and forty-four in the western. So that a fair proportion of the geographic knowledge of that date was introduced in that small space; but the mythical Southern Continent around the south pole was brought north to include Australia, and nearly reached Cape Horn.

In this relation of the legends on the Silver Map, it may be well, for reference and comparison, to follow the course and legends of Drake's track on the Hondius map of 1595 (?).

The Hondius Map 1595 (?) is in the British Museum, and a reproduction of part of it is published in the World Encompassed. Mr. Christy writes on page 40: this part "forms a large sheet intended "to commemorate the circumnavigations of Drake (1577-80) and "Cavendish (1586-8)." Upon it the course of Drake is elaborately shown by a continuous track line of minute circles; and that of Cavendish by short dashes.

Drake's course at the starting is marked by five vessels, and near the island Mogador is the legend "D. Exity." It then continues in such a detailed manner that it must have been laid down from authority. Off the northeast coast of Brasilia, we again find the

legend "D Excitus." Off the Rio Plata five vessels; and in latitude 43° S, a vessel is represented as burning, with the legend, "*Hoc loco flammis una navis F Draci perijt condemque fere tempore quæda oleo ab eo in Angliam deedit." At Port S. Juliano in latitude $49^{\circ} 15'$ south there are thrée ships. They pass through the "Fretum magellanicu"; but at the west entrance they are shown under bare poles. The track reaches to Cape Horn, named "Elizabetha." The next landfall is the Island of "Mucho," latitude $38^{\circ} 24'$ S, whence the track swings off to seaward with one vessel going before the wind in latitude 18° S. Among the coast names are "La cerena" in 31° S, "Coquimbo" in 27° S, "Arica" in $18\frac{1}{2}^{\circ}$ S, and others not named in the narratives. The track leads to "Lima" in 10° S, and thence along the coast to "C. S. Francisco" in 2° N. [$0^{\circ} 42'$ N.]

On the land is the legend, "Ad C. S. Francisco et ad universum Peruana tractum magnam auri et argenti vim, adipiscitur Dracus."

From Cape San Francisco in latitude $0^{\circ} 42'$ N., the track of the *Golden Hinde* is kept far off shore until it runs well along the peninsula of California; off the coast of Costa Rica is the ship, and the legend "F. Dracus," and another ship four hundred miles off the coast of Mexico.

Along the coast of California the track is laid down close to the shore from about latitude 32° to 40° , and continues to latitude 43° , where the track stops and an asterisk refers to the legend on the land: "*Hic præ ingenti frigore in Austrum reuerti coactus est lat. 42 die 5 Junij."

We have also the legend "NOVA ALBION sic à Francisco Draco 1579 dicta qui bis incolis codem, die Diadematē redimitus. cum Ser Regina Angliæ consecravit." Returning to latitude 38° there is an indentation in the shore line, and the track leads therefrom to the southwestward across the Pacific without any indication of the Ladrões or the Pelew Islands, and continues through the "Moluccæ" to an unnamed island, and thence to a point on the southwest shore of "Java Maior," with a vessel on the track leading therefrom; another vessel in latitude 33° S. and 1,500 miles east of "C. Bonæ Spei": close under the southeast side of the cape is a small two-masted vessel that may be intended for Cavendish.

From the Cape of Good Hope Drake's track leads northwest to "Sierra Liona"; thence it swings to the west and north beyond the

Cape de Verde Islands and the Azores to Plymouth. On this part of the track is the legend "Reditus Draci", and a vessel on the course heading for England.

There is a legend on the Terra Australis southwest of Cape Horn: "Insulas illas ad Fretu Magell. Fr. Dracus posuit: Verum Tho. Caundish et Hispani omnes ei reclamant fretum solummodo affirmantes et credibite est Dracum tempestatibus ibi fluctuantem vix serio loca illa serio observasse, duas cuim naves hic amisit." Also a legend to the southwest of New Guinea when the *Golden Hinde* was on the rock, "in 2° south lacking three or four minutes," near the island of Celebes: "Non longe ab insula Celebe Septentrione versus, "Draci navis in scopulum 20 horarum spacio illidebatur."

On this map is laid down the course of Thomas Cavendish with the legends, "C. Excitus" off the Strait of Gibraltar; "T. Caundish" off Acapulco; the ship off the east part of the Cape of Good Hope; and on his approaching England in the latitude of the Canary Islands, "R[editus] Caundish."

Later on we shall show the probable course of Drake along the coasts of Central America and Mexico, and thence to Cape Orford, Oregon.

THE PURPOSE OF ENGRAVING THE SILVER MAP, AND THE DATE
THEREOF.—THE MAP OF 1587.—DRAKE'S EXPEDITION
OF 1585-86.

MILLER CHRISTY.

In our examination we have been led to two conclusions adverse to those of Mr. Christy. The first is in regard to the purpose of engraving the Silver Map; and the second is in regard to the date thereof.

We believe the map was drawn to commemorate the achievements of the English Discoverers from the time of the Cabots, 1497, and of Frobisher, 1576-77-78, to the marauding expeditions of Drake and Cavendish; and was engraved after the latter's exploits.

To establish these points we begin by presenting the following comparisons of names and legends found on the Hakluyt F. G. S. map of 1587,* and those on the Silver Map.

Immediately under the Arctic Circle we find, on the F. G. S. map of 1587 the legend "*Meta incognita ab Anglis inuenta anno 1576*"; on the Silver Map, "*Meta incognita inuenta ab Anglis 1576*."†

On the map of 1587, "*Bacallaos Ab Ang 1496*"; on the Silver Map "*Bacallaos Ang 1490*"; probably the head of the figure 6 has been obliterated, and that it should read 1496.

On the map of 1587, "*Virginea 1584*"; on the Silver Map "*Virginea*."

*This map was designed by an unknown cartographer and dedicated to Richard Hakluyt, who collected so many narratives of voyages and travels. Mr. Christy gives a copy of it from which we extract the following dedication:

"*Doctiss. et ornatiss. Rich. Hakluyto*

"*F. G. S.*

"*Cui potius quam tibi Orbem hunc novum dicassem?*

"*cum tu assiduis eruditis que libris tuis ipsum eundem*

"*in dies illustriorem reddas. Eum igitur Vti tua hu-*

"*manitate dignum est accipe, teque nos vicissim ama-*

"*bimus. Paris. cal Maij, M.D.LXXXVII.*" Page 42.

Which Mr. Christy renders:

To the most learned and accomplished Richard Hakluyt,

F[—?] G[—?] S[aluting].—

To whom, better than to you could I dedicate this New World? For it is the one you daily render more illustrious by your exhaustive and learned books. Accept it, therefore, with your accustomed kindness, as we in turn will love you.—Paris, the Kalends [1st.] of May 1587:" (page 42.)

Henry Stevens gives a copy in his Historical and Geographical Notes. London and New Haven 1869.

This map we designate as F. G. S. 1587, or simply as 1587.

†Professor John Frost says that Queen Elizabeth, who was interested in Frobisher's second venture in 1577, gave the name Meta Incognita to his discovery.

On 1587, "C. Sta Helena" [Florida]; on the Silver Map, no name on that coast.

On 1587, "Hispaniola," [Haiti,]; on the Silver Map, "Spaniola."

On 1587, "Punctum California"; on the Silver Map the peninsula is named "Californoa."

On 1587, "NOVA ALBION Inuenta An. 1580 ab Anglis"; on the Silver Map, "NOVA ALBION ab Anglis 1580 inuenta."

Concerning these legends we remark that the errors of one are the errors of the other. The date for Frobisher's discovery of the turning point (Meta) of the continent is given by both maps as 1576.

The date for the discovery of the coasts of Labrador and Newfoundland is given as 1496 on the 1587 map; and 1490 on the Silver Map. We have suggested the latter date was intended for 1496. At any rate both are in error, the date should have been 1497, when John Cabot and his son Sebastian made the discovery on St. John's day, June 24.* They made a second voyage in 1498, and Gomara relates they met with so much ice after reaching the 60th degree of latitude, that Cabot sailed southward "folowynge the coast of the

**Hakluyt*, III, page 6. Extract from the Map of Sebastian Cabot, cut by *Clement Adams* concerning his discovery of the West Indies. In 1497 John and his son Sebastian set out from Bristol and on the 24th of June at five in the morning he discovered land which "he called 'Prima vista. * * * That Island which lieth out before the land he called the Island of 'St. John upon this occasion. * * * It is full of white beares, and stagges far greater 'than ours. It yeeldeth plenty of fish and those very great; as seales and those commonly we 'call salmons: there are soles aboue a yard in length, but especially there is a great abundance 'of that kinde of fish which the Sauages call *baccalaos*."

"As he traueiled by the coastes of this great land (which he named *Baccolaos*) he saith 'that hee found the like course [current] of the water. * * ;" (page 8.)

Another narrator quotes from the three decades of Peter Martyr's *Angleria*: "Sebastian 'Cabot himselfe named these lands *Baccalaos*, because that in the Seas thereabout hee found 'so great multitudes of certaine bigge fishes much like unto *Tunnies*, (which the inhabitants 'call *Baccalaos*) that they sometime stayed his shippe:" (page 9.)

John Davis the Arctic navigator, in his second voyage, 1586, says: "Great Cods, the fish 'swimming so abundantly thicke about our barke as is incredible to be reported."

These stories are substantiated by one even stronger in the *Encyclopedia Britannica*, VIII edition, Vol. XVII, page 636: In February the codfish reach "the Dogger Bank in shoals 'so dense that the sounding-line can hardly pass between them," although it was not the spawning season. On this point we quote from a late public document; (U. S. Commission of Fish and Fisheries, No. 522, 1904; pp. 193-7;) "When impelled by the spawning instinct the 'cod seeks the shoal water of the coast or banks in schools consisting of both sexes. * * 'The principal spawning of the cod on the New England coast is winter, but the season begins 'as early as November until April. * * Although sometimes found in shallow water 'cod are essentially a deep water fish, preferring water from 20 to 70 fathoms deep, and being 'found even at a depth of 300 fathoms."

The Spaniards afterwards applied the name somewhat indiscriminately as we learn from Dampier. He says "the *Rock fish* [Island Juan Fernandez] is called by Sea-men a grooper; 'the *Spaniards* call it a *Bacalao*, which is the name for Cod, because it is much like it." (The *Voyage round the World*, by Captain William Dampier, London 1699: 3 vols. Vol. I, page 91).

"land of Bacallaos until the XXXVIII degrees of latitude."* Both of the compilers could have obtained their authority from the "Map of the World" by Alonzo de Santa Cruz of 1542, whereon he has the names "Tierra del Labrador" and "Tierra de Bacallaos."

On Mercator's Map of the Western Hemisphere 1587, The Terra Avstralis is laid down, and reaches the region of Terra del Fuego, but the northwestern shore ends exactly where that of the Silver Map ends; and the gap between that and the southern part of New Guinea is the same in both. The F. G. S. map of 1587 has no Antarctic continent.

If we compare the track of the *Golden Hinde* on the Hondius Map of 1595 (?) with the Silver Map, we come upon a revelation. The track of the vessel is the same in both; the same courses at the outgoing; down the Brazilian coast with legend; up the South American coast with the same curves and stopping places; the same ship on the Mexican track; the same peculiar and notable ending at the northern latitude, and the same departure at latitude 38°. They cross the Pacific by the same route, through the Moluccas, touch the south side of Java; around the Cape of Good Hope to Sierra Leone; the same outstretching course to the west, north, and northeast homeward with legend.

Furthermore the introduction of more Spanish names on the California coast of the Silver Map would have given too much credit to their earlier navigators and explorers. What are introduced seem to fill gaps. There are several Spanish names on the F. G. S. map of 1587 and Hondius 1595 (?) that recall the discoveries of Cortés, Ulloa, Cabrillo, and Ferrelo, 1535-43. The Silver Map has the

*The subject of the Cabots and their explorations is full of difficulties, and has exercised the ingenuity of many investigators. As the latest of these researchers presents the name of Bacallaos, we briefly refer to the work of H. P. Biggar in "la Revue Hispanique", Vol. X, Paris, 1903.

He has taken up two points for special study, and has introduced several of the sketch charts of the period that are of interest to us only in the names they employ.

The Rush map of 1508 has the legend "I BACCALAVRAS" apparently in the region of the southeast cape of Newfoundland which is named "C. DE PORTOGESI", that is the C. Raso of an earlier sketch, the C. de Ras of Ptolemy, 1574, and the present Cape Race. The Kuntzmann Map No. IV (Biggar) says the Portuguese discovered and named DO LAVRADOR, which is the southern part of Greenland; and also applies the name BACALVAOS to the present coast of Labrador and Newfoundland.

On Thorne's map of 1527 we find in the north the legend, "Noua terra laboratorum dicta"; and along the whole coast "Terra hec ab Anglis *primum fuit inuenta*."

From these and other considerations presented by Mr. Biggar we learn that the name Labrador was originally applied to Greenland; and further that Bacallaos was transferred from a bay north of Cape Race to the whole of the lands thence northward to include the present Labrador.

Santa Barbara Islands named the Cazones, they are not on the 1587 map; but are shown on the maps of Zaltieri, 1566, Mercator, 1569, and Ortélius 1570. We judge this name was applied by the earlier returning galleons.

It seems to us that these comparisons and historic statements are sufficient evidence to throw the gravest doubt upon Mr. Christy's date of "1581, or not later than 1582. There is strong evidence "that it was almost certainly executed *before 1585*": page 38.

There is however evidence in the Silver Map itself to demonstrate that it was not produced until after 1586-1588.

Mr. Christy has wholly overlooked the track of Drake's piratical expedition of 1585-86 to the coast of Spain, the Cape de Verde Islands, the West Indies, Carthagenas, Cuba, and Florida. The track is undeniable although not laid down with minute accuracy; and none of Drake's names are inserted. For this reason we recall the general line of his next piratical movement and exploits after 1580.

One of his narrators, a hero worshipper, has written:

"Having enjoyed some short breathing since his last Great Adventure * * he provided a Navy of twenty-five Ships and "Pinnaces, aboard of which were two thousand three hundred Marines, and Soldiers with their respective Captains, and other Officers "both for Land and Sea Service: He embarked at *Plymouth, Sept. "12, 1585*, himself being Admiral."

Mr. Barrow quotes from Camden who says that five years after the 1572-3 expedition "when Drake had gotten a pretty store of "money, by playing the seaman and the pirate", he organized that of 1577; page 75.

This fleet of twenty-five ships harried the coast of Spain; was afraid to attack the Island of Palma; reached Ferro Island; on November the 21st; anchored at the island of Santiago of the Cape Verde group, and landed a force of one thousand men. Near the end of November the fleet with the soldiers sailed for the West Indies; and reached the island of Dominica, "inhabited by barbarous people." Thence "they went westward to the Isle of St. Christopher's" where they spent Christmas, and cleaned the bottoms of the ships. After this Drake sailed for the "Island of Hispaniola" [Haiti] to capture and plunder the city of St. Domingo. The people ransomed

the city by the payment of "twenty-five thousand Duccats (each five shillings six pence in Value)."

The fleet then sailed southward to the continental shore of South America, and followed it westward to Carthagena which was captured partly burned, and finally ransomed for "one hundred and ten thousand Duccats." Drake had lost many hundred men by sickness, and gave up his project to capture Nombre de Dios and the city of Panamá where he had hoped to get great plunder. "This City [Nombre de Dios] was the Granary of the West Indies, wherein "the golden harvest brought from Peru and Mexico to Panamá was "hoarded up till it could be conveyed into Spain."*

The Spanish map of 1789 by Juan Lopez de Vargas locates "Ruinas de *Nombre de Dios*" fifteen geographic miles east of "Porto belo."

So about April 12th Drake directed his "Course toward *Cape St. Anthony*, being the East of Cuba, where they arrived *April* the 27th, "and parting thence toward the *Havana*."

The fleet did not reach Havana, and after fourteen days returned to Cape St. Anthony, whence they departed on the 13th of May, and sailed along the coast of Florida.

On the 28th of May the fleet anchored on the coast in about latitude 30°; Drake landed his men at the mouth of the river San Augustin; marched up the river to the fort built by the Spaniards, who abandoned it when the armed boats came up the river. All the guns and a chest of £2000 of treasure were captured. Then Drake sailed for "St. Helena 12 leagues farther North," and followed the coast in search of Sir Walter Raleigh's colony of Roanoak. He relieved the fort, and finally took one hundred and three colonists to England. Barrow, page 209.

On the 18th of June, the fleet left the American coast and reached Plymouth July 28th, with plunder to the amount of about "three-score thousand pounds", and the loss of about 750 men; "and so "happily ended the voyage."

There is one notable error in the above authority; that Cape San Antonio is the "East" Cape of Cuba: it is really the West Cape.

The track of this expedition on the Silver Map passes around the Lesser Antilles, along the coast of Venezuela to Carthagena, thence backward and to San Domingo, and through the Bahama channel to

*Barrow, page 42.

the coast of Florida. The map has none of the names mentioned in the narrative save "Spaniola." Of course Florida is named as in the map of 1587, which also has "C. Sta Helena", as already mentioned.

Had the Silver Map been intended solely as a Medallion Commemorative of the exploits of Francis Drake in the expedition of 1577-80, as believed by Mr. Christy, it would have given precise dates for his discoveries. It has utterly failed. It would have presented more names directly connected with his exploits and his three discoveries. Instead, there are found older Spanish names along his course. He saw the "consuming fire of the Ilha del Fogo," but it is not named; he discovered Cape Horn but it is not indicated by any name or by his course. He made his richest capture off Cape San Francisco; it is nameless. He made his most important capture of documents and sea charts off the Gulf of Fonseca; there is no sign or track to show that his position was only two leagues from shore. Spanish names are introduced thence northward to the Cazes which Drake never saw. He started with supreme self-confidence upon his hazardous voyage from Guatulco to Nova Albion; but the name is not noted. He sailed therefrom five hundred leagues of longitude to find a favorable wind, but the course is laid down close to the coast.

He rediscovered and landed upon the Isles of Saint *James* (Los Farallones) off his anchorage in 38°, but they are overlooked on the Silver Map. He crossed the Pacific and first saw the land of the Pelew Islands (Palos); they have no place on the map, but we find Spanish names thence to the island of Sámar. The *Golden Hinde* was on the rock in the Celebes Sea, and in extreme jeopardy, but there is no intimation thereof; yet it is specifically mentioned on the Hondius map of 1595 (?), whereon reference is made to him in connection with the Terra Australis.

The Silver Map has upon it the Terra Australis, so has the Hondius map of 1595 (?); the F. G. S. map of 1587 does not have it.

Drake did not see the Terra Australis, or Australia.

The course of Drake through the West Indies and along the shores of the mainland from Venezuela to Florida is laid down on this Silver Map, but neither name, nor legend, nor date is given.

It is astonishing how erroneous much of the track of Drake is laid down where it was most expected and desired to be correct.

The manuscript charts in the Imperial Museum at München give Drake the fullest credit and the proper date for his discovery of Nova Albion, while the Silver Map states "*Noua Albion ab Anglis 1580, inuenta*"; his name omitted and the date erroneous.

The Dudley narratives and two of his charts give praise to Drake, and the proper dates.

Another point of interest in the matter of commemoration is in the arrangement of the hemispheres. It should be borne in mind that all the English discoveries to that period, (1586-7) had been made on the North American continent, and that two Englishmen had circumnavigated the globe.

The Cabots and Frobisher had been upon the northeast coasts, Drake and his friend Cavendish on the west and northwest coasts; and the latter had seen the coast of Lower California which Drake had not approached.* It might be reasonably assumed that the engraver laid down the Cavendish track along the west of Mexico and Lower California.

Weighing the evidence we have presented, we firmly believe the Silver Map was not intended as a medallion commemorative of Drake's exploits or discoveries. Much more likely it may have been intended to show what the English had done on the continent of America although the names of the Cabots, Frobisher, Raleigh and Cavendish have no place upon it.

The idea of giving credit to the English as a nation for the discoveries in North America rather than to the navigators making them is shown in the queerly erroneous chart of 1582, by Michael Lok the Englishman who ten years later fathered the bald fiction of Juan de Fuca. A reduced copy of this map is given by Mr. Christy in his Silver Map.† There credit is given to the Portuguese, Spaniards and English; thus: "*Lusitanorum 1520; Hispanorum 1540; Anglorum 1580.*"

Furthermore on this chart we find the "*Meta incognita*"; "*Angli 1576**," Frobisher strait or "*R. Elizabeth*"; Cabot's and Cortereal's names; but on the western coast we find neither the name of Drake nor of New Albion. That coast is grotesquely inexact, although it

*Cavendish in November 1587 viciously burned the *Santa Ana* galleon of 700 tons in the bay under Cape San Lucas, and left her people without provisions or the means of reaching the coast of Sinaloa. This was probably done to prevent the Mexican coast being warned of his presence, yet burned towns marked his track.

†"Illvstro Viro, Domino Phillippo Sidnæo Michael Lok Civis Londinensis Hanc Chartam Dedicabat: 1582." Lok gave his name to the land south of Meta Incognita.

suggests some acquaintance and knowledge of early authority. For instance, we note C. Californo in latitude 20°; Cedri In (Island of Cedros or Cerros,) in 28°; C. Inganno (Cabo del Engaño) in 30°; City of Quiuri in latitude 42°; the Sierre Neuada in 46°; and the Mare Bermeio (Vermillion Sea or Gulf of California) reaching to 45°. At about latitude 46°-47° the coast turns abruptly to the eastward and reaches the north side of "Apel Chen," the Appalachian mountains. This sharp turn of the coast from C. de Fortun demonstrates that Lok had the same source of information as Herrera had for his chart No. 1 in his description of the Indies.

The authorities suggested by the names are Cortés, Ulloa, Cabrillo, and Ferrelo, while an explanatory note refers to the galleons from the Filipinas making their landfalls on this coast.

Although Drake had returned from his circumnavigation Lok made no use of the knowledge he brought from this northwest coast which was freely given to Camden, Hakluyt and Dudley.

As to the date of the production of the plaque of the Silver Map and the sources of information for its construction we surmise that it was drawn from material then in possession of Jodocus Hondius* and which embraced the discoveries of Drake, and of Cavendish who had returned to Plymouth in September 1588.

It seems probable that it was executed by Hondius himself as a token of thanks to those who had assisted him in gathering materials for his coming map; and that the date may be even as late as 1594 when he was leaving England; and moreover that very few specimens were made.

Since closing this extended review of the Silver Map we have received, through the kindness of a friend, an example of the medal lately struck by the American Numismatic Society, New York, "In commemoration of the Discovery and Landing upon the Northwest Coast of America by the first English Circumnavigator 1579."

The obverse bears the portrait head of Drake in high relief with the legend "Sir Francis Drake 1540-1596." On the reverse is the western hemisphere from the Silver Map exhibiting the track of the *Golden Hinde*.

The report of the medal committee states that "Sir John Evans, calling "the attention of the Royal Numismatic Society to the

*Jodocus went to England in 1583; married in London in 1587; and returned to the Low Countries in 1594: Christy.

“Silver Medal or map of the world said: ‘of all the medals of the
“ ‘British series there is, perhaps, none of greater interest to the
“ ‘English speaking people on both sides of the Atlantic than that
“ ‘commemorating the voyage of Sir Francis Drake round the
“ ‘world, which he completed in the year 1580.’ ”

These two societies would thus seem to believe that the original Silver Map was struck in commemoration of Drake's voyage, and not as commemorative of the discoveries and explorations upon the continent of North America through nearly one hundred years. Yet no evidence is produced to sustain such an assumption.

NAMES OF PLACES ON THE WESTERN COAST OF
AMERICA RECORDED IN THE NARRATIVES OF
DRAKE'S COURSE FROM TERRA DEL
FUEGO TO ALBION.

It is not necessary to follow Drake on his long line of maraudings along the western coast of America save to indicate the large number of places that have been named, and thus prove how few of them have been noted in the Silver Map; and to indicate the use of Spanish and Portuguese charts by Drake.

Cape Virgin Maria, at the entrance to Magellan Strait: named by Magallanes the Cape of Eleven Thousand Virgins.

Cape Victoria, opposite Cape Virgin, named after Magallanes' flagship *La Vitoria*. "In 52 degrees $\frac{1}{2}$ southward of the Equinocial," [Nuno de Silva.]

The *Straite* or frete of Magallanes.

The *Streights* of Magellan.

"Thirtie leagues within the Streights there be three islands. To the largest our General gave the name of *Elizabeth*, to the 2 *Bartholomew*, because we found it on St. Bartholomew's day, the 3 he named *St. George's Island*."

Ihla del Fogo of the earlier Portuguese; *Terra del Fuego*.

Cape Deseado, the northwest point of Terra del Fuego at the western entrance of the strait. It was named *Capo dezeado* (Cape Desire) by Magallanes.

Mari Australi, being named *Mare Paciferum*.

Mari Pacifico, named by Magallanes.

The *Elizabethides*, the range of islands on the southwest part of Terra del Fuego.

"The utmost Island of *Terra Incognita* to the Southward of America," *Terra Nunc Bene Cognita*, the Cape Horn of later date, where Chaplain Fletcher landed and erected a monument. An island "neere in 56 deg." In 55° 50' S. on our charts.

The *Terra Australis*.

The Coast of *Peru*.

The Coast of *Chili*; the wines of *Chilie*.

Mucho Island, "so called by the Spaniards on account of its long circuit," in 37 deg. S.; also written *Moucho*, and *Mocho*. On our charts *La Mocha* in latitude 38° 24' S. In 1850, Lieut. Gilliss U. S. Navy reported it to be eight miles long northwest and southeast, and twenty miles from Cape Tirua.

Concepción: They passed the town of Concepción: it lies in latitude $36^{\circ} 46'$ S.

"*Valperizo* and the towne adioining *Saint Iames* of *Chili* in 35 deg. 40 min." This is the Valparaíso of today in latitude $33^{\circ} 06'$ S. so that Drake was $2^{\circ} 34'$ in error. Santiago de Chili is more than a hundred miles in the interior; but the narratives name it as the present site of Valparaíso.

Baldiuiia or *Baldívia*; the present Valdivia. "Baldivia weh is a city and lyeth about 4 leges from S. Yago vp into the lande, from whence cometh the best gould of all Perew," page 180: There is confusion here because Valdivia is in latitude $39^{\circ} 48'$ S.

"The *hauen* of *Saint Iago*, sixe leagues of Filippe Bay in 32 degrees and a halfe." Page 259.

Phillips Bay, so called by Drake after an Indian named Filippe; "in latitude 32 deg. or thereabout." It is Navidad Bay of modern maps and lies in latitude $32^{\circ} 13'$ S.

Lucuona, "a city called Lacerona a league distant from Coquimbo." This is La Serena in latitude $29^{\circ} 54'$ S.

Coquimbo in latitude $29^{\circ} 50'$ S.

Cyppo. They entered a bay to the south of the town of Cyppo. This bay they place in latitude 29 deg. 30 min.

In a bay to the north of *Cyppo* they trimmed the *Golden Hinde* and set up a pinnacle from the frame brought from Plymouth. It is placed in latitude 27 deg. 55 min. The narratives declare this to be a "conuenient harbour."

We can not find the name of Cyppo on any chart; and the bay is probably Los Pescadores of Lopez Vaz.; or the Guasca Bay of Kitchin's chart of 1785 (?) which is laid down in $28^{\circ} 25'$ S. The mining town of Parcipos in the Andes lies about one hundred miles to the northeast of Guasco town. Gyppo can not be confounded with Copiapo, which is in latitude $27^{\circ} 26'$ S., unless Drake's latitude is erroneous.

The Bay of "*Mormorena*" in 22 deg. 30 min. The Island of Morro Morena (brown rock) is in latitude $23^{\circ} 00'$ S. and forms the north side of the bay.

Tarapaçá and *Tarapacá*. This place is also called Sarcipaxa, and is in latitude $20^{\circ} 03'$ S.

Aríca; "The port of the town of Aríca, in 20 deg.," which is in "the Province of *Cusko*." It is the port where vessels discharge their

freight that is bound "from *Lima* to *Potosi*." It lies in latitude $18^{\circ} 27'$ S.

Chuli, *Chule*, *Chowley*, or *Chilé*; is the next place north of *Aríca*; it is in latitude $17^{\circ} 09'$ S.

Ariquipa. This is a city forty miles inland in latitude $16^{\circ} 24'$ S. On the coast is *Atiquipa* in latitude $15^{\circ} 45'$ S.

The coast of *Peru*.

El Callao de *Lima*, *Calao* of *Lima*, *Cooley*, *Lima*, *Lyma*. *Callao* is the port of the city of *Lima* a few miles back at the foothills. "Lima which is in 12 deg. south of the Line"; and by another authority "in 12 deg. 30 min." It is in latitude $12^{\circ} 04'$ S. At *Callao* Drake found a large fleet of merchant vessels, searched them, cut them all adrift, and promptly sailed northward in chase of the treasure ship *Cacafuego*, which had left for *Panamá* two weeks before. He feared his consorts might be ahead of the *Golden Hinde*.

Harbour of Payta: also *Paita*, latitude $5^{\circ} 06'$ S. Drake took a ship from this port, and gives the latitude 4 deg. 40 min.

Port Saint Hellen, latitude $2^{\circ} 10'$ S.

Guiaquill, city at head of the Gulf in latitude $2^{\circ} 12'$ S.; but the *Golden Hinde* did not enter the gulf.

Cabo de San Francisco, in "1 deg. of North latitude." This is where he captured the treasure ship *Cacafuego* and was six days in taking out her treasure and cargo. It lies in $0^{\circ} 42'$ north.

Panamá which Drake avoided: Latitude $9^{\circ} 00'$ N.

The coast of *Nueva Espanna*.

The land of *Nicaragua*.

"*Iland of Caines*," the "*Island of Canno*," the *Cano* island of our charts, in *Coronas Bay* north of the entrance to the Gulf of Dulce, *Costa Rica*. The *Golden Hinde* was anchored one mile from the main land abreast the mouth of *Drake River*. They experienced a submarine earthquake here. The latitude is $8^{\circ} 43'$ north. One narrative authority says it is "in eight degrees of northerly latitude."

Port of Papagaia on the northwestern coast of *Costa Rica*, between *C. Elena* and *Pt. Descarte* just under 11° north.

Two leagues off the Gulf of *Fonseca* Drake captured the ship from which he got the "seacharts" from *New Spain* to the *East Indies*. Name of place not recorded.

The Port of the Vale of Balms of *Jericho*. *Libertad* in latitude $13^{\circ} 40'$ N. at the eastern limit of *la Costa del Balsamo*, south coast

of the republic of Salvador, about ninety geographic miles westward from the Gulf of Fonseca.

Guantapico; Tehuantepec at the head of the gulf of the same name. The latitude of Ventosa is $16^{\circ} 12' N$. "And diuers other ports and gulphs."

Guatulco, also Agwatulca, a small bay and town on the southwest coast of Mexico, where the *Golden Hinde* took in water, wood and some provisions, in latitude 15 deg. 40 m. Belcher places it in $15^{\circ} 44' N$. Nuno da Silva was "caryed to Mexico": p. 175.

This is the last of the fifty names of places recorded in the different narratives from the Strait of Magellan along the coast of America, and the engraver of the Silver Map failed to note only Mucho and Lima, while there was plenty of space for more. He evidently was not aiming to note explicitly Drake's track; not even at Cape San Francisco, nor the Gulf of Fonseca, nor the port of Guatulco, whence the *Golden Hinde* started upon her remarkable voyage.

We shall refer to New Albion in its proper place.

It will be noticed that none of the narrators mention the name California. We have shown that the name was upon maps of dates before Drake's expedition.

DRAKE UPON THE COASTS OF CENTRAL AMERICA AND MEXICO; MARCH 15TH TO APRIL 16TH 1579.

THE SEIZURE OF SPANISH DOCUMENTS AND SEA CHARTS.

Drake made diligent search along the coast of South America from latitude 30° S., the point of rendezvous for the *Elizabeth* which might have ridden out the long, violent storm after getting into the South Sea; which she did; but Captain Winter returned to England. He skirted the shore in the pinnace with the *Golden Hinde* in the offing. Thence he moved northward, plundering ships, seizing pilots, robbing towns and stealing cattle.

When he reached Callao he took the thirty Spanish vessels by surprise; relieved several of them of their specie; cut the masts of the largest two, and the cables of all, that they might drive ashore or to sea and not pursue him. Here he learned that the richly laden *Cacajuego*, commanded by Juan de Anton a Biscayan, had sailed for Panamá nearly two weeks before; and he quickly pressed in pursuit. He overtook the vessel off Cape San Francisco, near the Equator, took her seaward for sixty hours [six days] to avoid recapture; relieved her of "13 chests of ryals of plate, 80 lbs. weight "of gold, 26 tons of uncoined silver and a quantity of jewels and "precious stones"; valued at about a million and a quarter dollars.*

This rich prize must have largely influenced Drake's subsequent movements. The whole coast was aware of his presence, and from Callao two vessels were fitted out to pursue him, and he would not venture to make an attack upon Panamá notwithstanding his earlier prayer for vengeance.

The *Golden Hinde* had been a long time at sea and had become leaky; and her bottom was covered with barnacles, star fish, sea weeds, etc. Drake therefore desired to find some small bay where he would be out of the usual tracks of the Spanish traders and galleons. He not only needed wood, water and fresh provisions, but it was necessary to careen the vessel to find the leak or leaks as well as to clean the bottom.

Whatever his future course might be a sound and clean vessel well provisioned was his only hope of reaching home. He would

*Dampier says: "The Island *Plata*, as some report, was so named by the Spaniards, after "Sir Francis Drake took the *Cacafoga*, a ship chiefly laden with Plate, which they say he "brought thither, and divided it here with his men." Vol. I, page 132. Plata Island is laid down one hundred and forty-five miles southwestward from Cape San Francisco.

Cape San Francisco is found in Ptolemy of 1574 as "C. de S. Franco."

not venture the Magellan Straits because he was satisfied the Spaniards would there lie in numbers sufficient to overwhelm him. He would hardly risk a course around Cape Horn after his experience there. He had already broached the project of sailing far to the north and try to find a northeast passage from the Pacific to the Atlantic. His company had acceded to this; but whether he really intended to carry it out may well be doubted. "R. M." who said he was with Hawkins and with Drake is quoted by Barrow, page 411, as writing, "Sir Francis was a willing hearer of every man's opinions, "but a follower of his own."

From Frobisher he knew that route was blocked with ice even if there was a water way. Therefore in his farther progress he avoided the Bay of Panamá and the many bays to the westward of Puntas Mala and Mariato, and passed the Gulf of Dulce.

From the western point of the peninsula of Dulce to Cape Blanco, the southwestern point of the entrance to the Gulf of Nicoya, the distance is one hundred geographic miles and the course northwest by west. Inside this chord the south coast of Costa Rica retreats thirty miles to the northward.

After Drake had sailed along the west coast of the Dulce Peninsula for thirty miles to Pta. Llorena he saw the coast turn sharply to the north by east; and must have naturally concluded this retreat would be out of the regular course of galleons and traders, who would steer between the two headlands mentioned. Following this coast for eight miles a farther retreat to the eastward of Pta. San José presented the probability of an anchorage and hiding place.

Burney says: "They made the coast near a small island named "Canno, two leagues distant from the mainland, in a small bay of "which they anchored in five fathoms; close to the shore,* and "near a fresh water river. This place was chosen to refit the ship."†

As some doubts have been held whether Drake was anchored at the Island of Caño or close to the main land, we refer to the map of Costa Rica by Colonel George Earl Church, which accompanies his paper read before the Royal Geographical Society, and published in the proceedings for July 1897. He places the island of Caño in latitude

*Nuno da Silva. *The World Encompassed* says, "We settled ourselves in a fresh water "river between the main land and the island of *Caines*." "Y. del Cannon"; Ptolemy, Edition 1574.

†A *Chronological History of the Discoveries in the South Sea or Pacific Ocean* * * * by James Burney, Captain Royal Navy. * * London, 1803: 5 Parts, Part I, Chap. XIX, pages 339, 340.

8° 43', longitude 83° 52' W; with a length of three miles and a width of half a mile. He lays down the Puerto de Coronada three miles east of Pta. San José, at the entrance of the "R. Drake"; thus recognizing the locality. He places the mouth of this river in latitude 8° 42', and longitude 83° 38' west; the World Encompassed gives 8° N., (page 219.) The present name of the river on the maps of Central America (Costa Rica,) is Sieppe, and there is a hill of 1012 feet elevation on the left or south bank that completely sheltered and hid Drake's anchorage.

Here the *Golden Hinde* was hove down, breamed, and repaired. On the 20th of March, four days after her arrival a "small coasting frigate" was seen passing close to Caño Island, and the pin-nace was manned, armed, and sent in pursuit. She brought in a Spanish vessel which was utilized as a storehouse for the gold and silver during the repairs, wooding and watering, which were finished on the 24th; when Drake sailed out with the Spaniard in company for two days longer; took out some of the crew as pilots, and let her go on her way.

"On April 6, a little before sun-set, they discovered a ship, that "held on her course about two leagues to seaward from the main "land." She was captured, and among the prisoners was Don Francisco Xarate who was sailing to Panamá, from which port he was bound for China with letters and patents in his possession. The capture of this ship, whose name is not given, was the turning point in the fortunes of Drake's Pacific adventure. Burney writes; (page 391,) "among the papers of this vessel, were letters "from the King of Spain to the Governor of the *Philippine* Islands, "and 'sea cards wherewith they should make their voyage, and " "direct themselves in their course.' "

Burney is in doubt whether these "sea cards" were "charts" or "only cards of steering compasses." Capt. Edward Cooke in his "Voyage to the South Sea," etc., 1708-12, calls them "Manuscript Coasting-Pilots, or Waggoners," Vol. I, p. 46; and Lord Anson gives a capital specimen in the Narrative of his voyage 1741-42, between pages 384 and 385.

These sea charts afforded Drake a knowledge of the northwest coast of America already reached by some of the galleons returning from the Philippines. Hondius lays down the coast farther north than 48°, and Dudley delineates it to 49°. They also presented him

with all the Spaniards knew of the Ladrones, Philippines, Moluccas, Celebes, Borneo, Sumatra, Java and Timor; and beyond that all the sea knowledge which the Spaniards and the Portuguese knew thence to the Cape of Good Hope. They showed him the general trend of the coast hence along that of New Spain, and the peninsula of California, and farther north.

The revelations gained from the official papers, and from the secret charts of the Pacific and the Indies, proved a disaster to Spain, of which Drake could not divine the consequences.

He learned from the prisoners he took off Caño Island, and from the pilot of the last vessel captured, of the harbor of Guatulco,* New Spain. This bay is about fifty geographic miles westward of Salina Cruz, Tehuantepec, and the only safe anchorage between Ventosa and Acapulco. The geographic position is latitude $15^{\circ} 44'$, and longitude $96^{\circ} 10' W$; Acapulco lying 225 geographic miles to the west-northwest. Dampier the freebooter describes it. Of course the place was plundered and among the valuables Drake took a "Pot of about a Bushel full of Ryals of Plate they found in "the Town, with a Chain of Gold and other Jewels, which they "entreated a Spaniard who was flying away with them, to leave "behind."†

At Guatulco Drake put ashore all his Spanish prisoners as well as Nuno da Silva the pilot of the Portuguese vessel‡ he had captured at the island of Santiago of the Cape Verde Islands; concerning whom see Hakluyt, Vol. III, page 743.

Drake's visit to Guatulco was a blight to Guatulco, but in June 1587 Thomas Cavendish aggravated the misfortunes of the people. With supreme maliciousness he burned the town, customs house and the church. Other settlements shared similar vindictiveness.

Hakluyt says that when Drake was at Guatulco he considered it hazardous to return home by the Strait of Magellan; "he resolved "therefore, to auoide these hazards, to goe forward to the Islands "of the *Malucos*, and therehence to saile the course of the Portu- "gales by the Cape of *Bona Sperança*."¶

*Shown in the Edition of Ptolemy, 1574: Venice.

†*The English Hero*, or Sir Francis Drake Reviv'd; 1739, page 115.

‡Named the *Mary* by Drake doubtless because she was from the port of Santa Maria, Portugal.

¶Hakluyt Society's *World Encompassed* page 220, Appendix V, Extracts from Hakluyt's Voyages.

On the 16th of April Drake left Guatulco upon his delusive attempt to find a northeast passage to the Atlantic.

Upon leaving Guatulco the Narratives give different accounts of the course of the *Golden Hinde*: One writes that she "sayled northwards till she came to 48. gr."; another that she "sayled 800 leagues at least to get a winde"; another that she set her "course directly into the sea, whereon we sayled 500 leagues in longitude to get a winde"; that she sailed 400 leagues to get a wind; and that she sailed six hundred leagues to latitude 42 degrees.

The fact is he was compelled to push directly seaward to avoid the calms along the coasts; and they gradually gained a good northing.

THE PROBABLE TRACK OF THE GOLDEN HINDE FROM GUATULCO TO CAPE SEBASTIAN OR CAPE BLANCO.

It would appear that no critical use has been made of the "North Pacific Coast Pilot charts,"* in trying to find a reasonable course for the *Golden Hinde* from Guatulco Mexico, $15^{\circ} 44'$, longitude $96^{\circ} 10'$, to the landfall of Cape Sebastian on the coast of Oregon in latitude $42^{\circ} 20'$, longitude $124^{\circ} 26'$. We have consulted the charts for April, May, and June 1905, and condense the results of our investigation.

Off the southern Coast of Mexico the currents are variable, as mentioned by Belcher,† but with the latest material of the U. S. Hydrographic Bureau we find the current runs to the northwestward; the winds are light and variable with an occasional strong "Norther"; and ten per cent of the days are calm for one hundred miles off shore.

We assume that the vessel made a westsouthwest course from Guatulco to latitude $12\frac{1}{2}^{\circ}$, and longitude 101° West. The distance is about 110 leagues, and the position within the limit of the light northeast trade winds.

From this location we lay down a general course about westnorthwest to latitude 20° , longitude 120° . She was carrying the "trades", and the current was still in her favor. The distance 380 leagues.

Thence a course northwest by west could be held to latitude 30° and longitude 135° , when she would lose the northeast trades, and have an adverse current for half of the distance of 340 leagues. Six per cent of the days would be calm on this course.

The vessel had now reached the southern limit of the summer northwest winds, with occasional stiff northeast breezes.

From the last position the *Golden Hinde* may have made a general course of north-northeast to latitude 40° , and longitude 129° ; at first working well to the northward and bearing away to the northeast. This would place her 70 leagues west of Cape Mendocino, and the distance sailed 220 leagues. She was in this latitude about the end of May.

Here the winds grow stronger, and the swell heavier and continuous from the northwest, and the current runs to the southward. After heavy weather this swell is so great when it reaches Cape Mendocino

*Published monthly by the Hydrographic Office of the U. S. Navy Department. They embrace the accumulated knowledge of the currents, direction and force of the winds, and other information of practical value to the navigator.

†Volume I, page 156.

that in winter it has been seen to break in nine and a quarter fathoms of water; only two other places in the world reporting such conditions.

We judge from the narrative that by noon of June 3rd,* notwithstanding the increasing force of the wind and the large swell, the vessel was in latitude 42°, having made 55 leagues, and being 35 leagues off the coast.

In the night of the 4th of June the northwester came down fiercely, the temperature fell, and the vessel must have had a hard time to hold her position. We believe she did not keep her latitude.

One narrative says they made two degrees more to the northward under these conditions by the 5th, when they were forced to seek the land, which had not been seen since leaving Mexico.

The "Famous Voyage" says that on the 5th of June the vessel was in latitude 43° when they sought the land. This would add twenty-five leagues to her direct distance and place her 30 leagues from the coast, which she unexpectedly made the same day. If the weather was clear the summits of the Coast Range would be visible on the horizon at 20 leagues distance.

That latitude is the highest which can possibly be conceded to the *Golden Hinde*.

With the courses and distances mentioned we find a total of 1160 leagues to compare with the 1400 leagues stated by the narratives. All things considered the agreement is satisfactory.

The average daily run for the whole trip of forty-nine days was seventy-one geographic miles. The vessel very likely did not make that much in working off the coast of Mexico; and when she struck the heavy northwester she would have been fortunate to hold her own.

In 1854-57 we made four trips from San Francisco to Puget Sound in April or May of each year, and averaged twenty-two days. On one trip, when in latitude 42°, well off the Coast, we encountered a heavy northwester which blew for five days and nights, and raised a tremendous swell, so that we could not work to the northward ten miles in that time. The vessel was the United States Coast Survey herm. brig *R. H. Fauntleroy*, clipper built, in good trim, well found and manned, and "sailed for all she was worth." In that storm, as

*On June 2d 1579 Captain John Winter reached England in the *Elizabeth*, that returned home through the Strait of Magellan, after the separation in the great storms.

in most northwest weather at sea, the sky was clear night and day.

The *Golden Hinde* could not possibly have held her own in such weather. Notwithstanding the admission that the weather was very bad, one of the narratives claims that from latitude 42° , on June 3rd at noon, she reached two degrees farther north. That on the 4th at night the cold was so piercing that the people were quite benumbed and it increased "to that extremity in sailing two degrees farther north, that meat, as soon as it was removed from the fire, would presently be frozen, and the ropes and the tackling of the ship quite stiffened."

The vessel could not have sailed two degrees north from noon June 3rd to noon June 4th. It was a physical impossibility that she could have reached 44° . The "Famous Voyage" says: "The 5. day of June, being in 43. degrees of the pole Arcticke, we found the ayre so cold, that our men being greivously pinched with the same, complained of the extremitie thereof, and the further we went the more the cold increased upon us. Wherefor we thought it best for that time to seeke the land, and did so, finding it not mountainous, but low plaine land, till wee came to within 38. degrees towards the line." Hakluyt, Vol. III, page 737.

The usual temperature in that region, and at that season of the year is fifty-five degrees Fahrenheit.

With the heavy northwest swell, and the Pacific Coast current increased in velocity by the northwester still blowing, the *Golden Hinde* would fall well to leeward when she was headed for the coast. If Drake made the latitude of Cape Orford or Blanco, $42^{\circ} 50'$, the very extensive Orford Reef of many high rocky islets, and sunken rocks marked by breakers would have warned him of danger, and called for some notice. By avoiding this danger he would pass the best summer anchorage on the coast north of Point Reyes. He would have had the landfall of Pilot Knob or Bald Peak, 2850 feet high in close view: and as he drew closer inshore the Rogue River Reef would have still kept him alert. The coast line is very bold, rocky and high, and covered with trees to the summits of nearly all the mountains. He would have seen the break down of the mountains at the entrance to the Rogue River, latitude $42^{\circ} 25'.$ *

*This is very probably the Rio de los Reyes of the early Spanish navigators, after Aguilar's discovery: the Ensa. de Indios Bravos of the *Sutil y Mexicana*, 1792; and well named as we personally know.

South of this river is Cape Sebastian in $42^{\circ} 20'$; Mack's Arch reef; and Cape Ferrelo in latitude $42^{\circ} 05'$; whence the coast trends to the eastward and reaches the low valley through which flows the Chetko River, at the northeast part of Pelican Bay, so named by La Pérouse.* The mountains behind Capes Sebastian and Ferrelo reach an elevation of 2280 feet in a very few miles. The anchorage is exposed to the southwest swell, and has several sunken rocks. It is a bad anchorage in northwest weather as we know by experience.†

The narrator says the land was "not mountainous but low plaine land"; but the statement is wholly inaccurate: it is a high, bold coast with a slight break down behind Pelican Bay and Point St. George in latitude $41^{\circ} 45'$: See Coast Pilot of California, Oregon and Washington; description and views.

Another reason given in one of the narratives for Drake not pushing farther northward was the fact that the land trended to the westward toward Japan; and some of the München manuscript charts even locate that country within a few days sail from the Oregon coast; in fact Dudley makes "Le Strette di Iezo" only one hundred and eighty geographic miles wide.

The following brief statement of the latest geographic determinations on this coast will show its general trend.

The coast of California trends to the northwest from San Francisco to Cape Mendocino, thence it runs nearly north, with two slight curvatures eastward between three points: Mendocino in latitude $40^{\circ} 26'$, longitude $124^{\circ} 22'$; Cape Orford or Blanco in latitude $42^{\circ} 50'$, longitude $124^{\circ} 34'$; and Flattery Rocks in latitude $48^{\circ} 10\frac{1}{2}'$ and longitude $124^{\circ} 46'$.

Dourado's chart of 1580 laid down the whole coast on a nearly west course from the region of the Santa Barbara Islands. In 1603 Vizcaíno wrote that from the latitude 42° "the coast trends onward "to near Japan and the coast of Great China, which is but a short run "away, and the same is the case with regard to Tartary and the "famous city of Quinsay", [Peking]: letter of May 23rd 1603 to the Viceroy of New Spain.

On page 19 of Mr. Christy's memoir he says Drake "continued "sailing northward [from Guatulco] searching for a passage leading

*Chetko river named from the Chitkos-tenneh who inhabit this region.

†For a detailed description of this coast see the Coast Pilot of California, Oregon and Washington, Edition of 1886. Washington.

“eastward from the Pacific to the Atlantic until he met with high
“contrary winds and severe cold, when he decided, with the consent
“of all on board, to relinquish this project and return home round
“the World by way of the Moluccas and the Cape of Good Hope.”

We submit that he has not done justice to the subject.

DRAKE DID NOT REACH A HIGHER LATITUDE THAN FORTY-TWO OR FORTY-THREE DEGREES.

CONTEMPORARY AUTHORITIES; AND DISCUSSION.

We go back to the date of June 3rd 1579 to note what narrative and what authority exist for the *Golden Hinde* having reached the latitude of 48°, or Vancouver Island.

Of the two principal authorities for Drake's voyage of 1577-80 we have the Famous Voyage, and the World Encompassed.*

There are three editions of the former; the first occurs in Richard Hakluyt's Collection of Voyages published in 1589, nine years only after Drake's return home, and seven years before his death; republished in 1598-1600; and a reprint of the latter in 1611.† In a recent letter which we have received from London some changes from the first to the second edition are noted; and that Hakluyt used the first person singular in the narrative without any statement of authorship. This must have misled a writer, in the VIIIth edition of the Encyclopædia Britannica, to assert that Hakluyt accompanied Drake on this expedition; Volume VI, page 97, column 2.

Richard Hakluyt Prebendary of Bristol was a man of education, and after taking holy orders at Oxford gave most of his time and study to collecting and publishing narratives of "Divers Voyages touching the Discovery of America", as early as 1582.

If a choice is to be made between his account of Drake's exploits in his Famous Voyage in the edition of 1589, and of nephew Francis Drake's account in the editions of 1628, 1635 or 1652 in the World Encompassed, we submit that the decision must be in favor of Hakluyt, who was within earshot of Drake, Fletcher and others. Drake's nephew or his compiler would naturally gather what he could in favor of his uncle although he had been dead thirty-six years, and harsh judgments had been mellowed, wrongs forgotten, and every actor had departed.

John Barrow declares that "the most ancient and independent

*"*The Famous Voyage of Sir Francis Drake* into the South Sea and there-hence about the whole Globe of the Earth begun in the yeere 1577."

The World encompassed by Sir Francis Drake, being his next Voyage to that to Nombre de Dios formerly imprinted; carefully collected out of the notes of Master Francis Fletcher, Preacher in this employment. * * * London * * * 1628.

It was reissued by the Hakluyt Society London, 1854.

†In some copies of the 1589 edition there is a map with the coast line of northwest America terminating at Cape Mendocino in latitude 43°, but we have not seen it.

"authority is that of Hakluyt;" page 97; and that in the *World Encompassed* Doughty's name is never mentioned; (page 99.)

When the subject is viewed in different aspects it is a reasonable assumption to say that Hakluyt was the author of the "*Famous Voyage*"; and that he had access to good and tangible authority; and could weigh the evidence presented by different narrators.

The *World Encompassed* was not published until 1628, or forty-eight years after the return of Drake, and was published under the direction of Francis Drake a nephew of the Admiral; a second edition was published in 1635, and a third in 1652, or seventy-two years after Drake's return and fifty-six after his death. This work has no pretensions to originality, and appears to have been based upon the "*Famous Voyage*", and from traditions, or records of some people who accompanied Drake.

The *World Encompassed* has been relied upon by Burney in his collection of voyages, Part I, London 1803; and by two earlier writers or compilers. In late years it has been relied upon by Dr. Travers Twiss* in his argument during the controversy between Great Britain and the United States on the subject of the northwest boundary between the United States and Canada. He treats the whole subject from a partisan standpoint, and naturally strives to prove the higher latitude of 48 degrees.

In his comparison of authorities it is amusing to find him state that the "*Famous Voyage*" of 1589 "agrees" with the "*World Encompassed*" of 1628 or later; and one or more similar phrases. He even compares our "*Northwesters*" with the "*Northers*" which lower the temperature of New Orleans and Mexico to a winter condition. We can not accept Dr. Twiss as an authority.

It will be seen as we progress that Mr. Corbett has taken the same view as Dr. Twiss, and is just as determined that Drake sailed his dull ship six degrees of latitude in less than two days against a north-wester.

The *World Encompassed* asserts that Drake searched the coast diligently even unto the 48th degree. Sir William Monson† writes that Drake left his known course and ventured upon an unknown sea in latitude 48° to which latitude he arrived. Burney quotes

**The Oregon Question Examined*. In respect to Facts and the Law of Nations. By Travers Twiss D. C. L., F. R. S., * * * London * * 1846. 1 vol. 8vo. 391 pp. One map.

†Burney, Part I, page 243n; Sir W. Monson's *Naval Tracts*, Book IV. Monson sailed with Drake in the Spanish wars after his return in 1580.

the "World Encompassed" and considers the statement "explicit "on the subject." He also quotes Monson favorably. Evidently he declares for 48°, and even refers to Juan Rodriguez Cabrillo as describing part of the coast in the winter season; when the weather was clear, and Drake seeing it in summer when the inland mountains were obscured.

The fact is, Cabrillo and Ferrelo made and named the landfall of the high wooded shoulder behind Fort Ross in latitude 38° 31' El Cabo de Pinos; it is very probable he saw the crestline of the Coast Range (2200 feet) behind Point Arena, in latitude 39°. It is a bare possibility he saw King Peak (4090 feet) of the Coast Range in 40° 09'. He probably reached latitude 42° 30', but was seventy miles off shore.

In regard to the weather off the coast north of San Francisco, the winters are the unfavorable and rainy season with the land frequently hidden by mist and rain; and Cabrillo and Ferrelo found that out to their discomfiture and discomfort.*

Burney was striving to put Drake at the high latitude without knowing all the conditions involved.

Mr. Julian S. Corbett has made the same attempt to fix the extreme of 48° of latitude. On pages 305 and 306 of his *Tudor Navy*, he writes, that on June 3rd they "observed" themselves to be in 42° north, when straight the weather fell with extreme and nipping cold. On the 4th rain froze as it fell; ropes grew stiff, and the crew were so benumbed they could hardly manage the ship.

The more they labored the more bitter and intolerable grew the cold: the meat froze as they took it off the fire!

Another day passed, and the wind, more cruel than ever, shifted to northwest, forced the vessel to the eastward, when suddenly on the fifth they found themselves close to the land. The weather continued bad.

They were compelled to anchor in the best roadstead they could find, and were even driven from that; it was a "bad bay."

"This was the first week in June, and they were, as they reckoned in 48°;" page 306.

Then comes a foot note by Mr. Corbett stating that Professor Davidson "the most learned authority on the point", is mistaken

**Voyages of Discovery and Exploration on the Northwest Coast of America from 1539 to 1603.* By George Davidson, Assistant U. S. Coast and Geodetic Survey, Washington, 1886; Quarto, 100 pp. One chart.

in supposing that Drake did not sail from 42° to 48° in less than two days in the stormy weather recorded.

The trouble is that Mr. Corbett is the authority at fault. He forgets to note that the narratives say they "observed" the latitude in 42° ; after that every location must have been "reckoned"; and they did not use the log at that period.

He exaggerates the statements of the narratives; he presents no new authority or explanation; and he evidently knew little of the climatology and currents of the north Pacific. In fact after the publication of our "Identification" of Drake's anchorage on the coast of California he wrote to us asking for our views upon the highest latitude reached. We wrote a long statement, mentioned authorities, gave our views from experience, and probably sent him a copy of our "Identification" paper, and explained, as well as we were able, the reasons for our belief that the *Golden Hinde* never reached higher than 43° of latitude. Our letter was never acknowledged; but many months afterward he wrote again stating that he had arrived at the conclusion that Drake reached 48° , and asking if we had any further arguments to offer for our stand. Of course we remained silent.

We need not refer to the explanations we have made about the limit of 43° . Had the *Golden Hinde* made the coast in latitude 48° , just south of the Strait of Fuca, with Mount Olympus, 8300 feet high in view; she would have passed on her southern search the mouth of the Columbia River, the bold head of Tillamook, Cascade Head, Cape Foulweather and the northwest anchorage of Yaquina Point in latitude $44^{\circ} 40'$, Cape Perpetua, and Cape Gregory in $43^{\circ} 20'$, before she reached Cape Orford from seaward on June the fifth.

Not a word of the character of that varied and impressive coast; not a reference to the presence or absence of dangers, so important to the navigator; not a word about searching for a harbor in which to repair the vessel; not another intimation of the weather.

In order to clinch our presentation of reasons to Mr. Corbett for the latitude of 43° , we appealed to the Hondius Map of 1595 (?) in the British Museum; a copy of part of which accompanies our "Identification" paper.*

That map so far as it relates to the Pacific coast is based upon Spanish and Drake authorities. Credit is given to Drake for New

*The part of the map we asked for was drawn by authority of the custodian, but Drake's track was not drawn throughout, only the ending which covered the asterisk.

Albion, and a "side plan" exhibits the "Portus Novæ Albionis" (not named by Drake), with a legend of Drake having been twice "crowned" there. And further to indicate his obligations to Drake, Hondius has given the latitude which the *Golden Hinde* reached.

In latitude 43° there is an asterisk placed at the northern extremity of the peculiarly marked track laid down for the ship parallel with the coast from the southward and the reference thereto, on the mainland has the legend: "*Hic præ ingenti frigore in Austrum reuerſi coactus est lat. 42. dies Iunij."

The authority of the Hondius Map can not be gainsaid. The title given in the "WORLD ENCOMPASSED" is:

VERA TOTIVS EXPEDITIONIS NAUTICÆ.

"Descriptio D. Franc Draci qui 5 navibus probè instructis. ex Anglia Solvens 13 Decembris anno 1577. terrarum orbis ambitum circumnavigans, unica tantum navi, ingenti cum gloria ceteris partim flammis, partim fluctibus correptis, in Angliam redijt 27 Septembris 1580. ADDITA est etiam viva delineatio navigationis Thomas Caundish nobilis Angli, qui eundem Draci cursum ferè tenuit etiam ex Anglia per universum orbem: sed minori damno et temporis spacio; vigesimo primo enim Julij 1586 navem conscendit, et decimo quinto Septembris 1588 in patriæ portum Plimmouth, undè prius exierat magnis divilijs et cum omnium admiratione reversus est. Iudocus Hondius."*

This explicit statement clearly demonstrates that Hondius had access to the discoveries of Drake, of Cavendish, and surely of the Spaniards.

There is another Hondius Map, to which we called attention in our "Identification" paper; and which we have described and in part copied; pages 41-43, chart No. 11.

It is dated at Amsterdam 1618, 1627, and would appear to have been begun by the elder Hondius, (Excudebat Iodocus Hondivs * * 1618), and finished by the younger Hondius (Executum

*We call attention to a curious error in the Hondius Map as exhibited in the World Encompassed. The prime meridian is evidently that of Ferro Island, and runs through the centre of the eastern hemisphere. The meridians to the eastward are denoted by tens to the circumference which is numbered 90°. Then the western circumference of the western hemisphere which should be the same 90° is numbered 100°; the centre meridian is 190° instead of 180°, and the eastern circumference of the western hemisphere, coincident with the western circumference of the eastern hemisphere is numbered 280° instead of 270°; and the 360° meridian is necessarily ten degrees west of the prime or zero meridian.

apud Henricus Hondium * * 1627.) It carries the legend "NOVA ALBION" in latitude 43° , and a little to the northward of the Spanish "P. de Todos Santos." On the main body of the map is the legend, "N. ALBION. Sic a Fr. Draco 1579 dicta * * *. Iacet "sub 42° grad. adeo que est frigida ut Francisco Draco præ ingenti "Frigore in Austrum reverti coactus fit Mense Iunio."

It is not necessary to make any comment upon this crisp and explicit statement. The map is in two hemispheres, each four feet in diameter, and elaborately drawn, explained and illustrated. It was published a year before the World Encompassed.*

On the photographic copies of the manuscript charts of the Pacific coast in the Imperial Museum, München, we find in the legend of No. 83, "the coast * * was named New Albion but the "insupportable cold held on. Even from 42° ," to the port he locates in $38\frac{1}{2}^{\circ}$. On No. 85 the legend relates particularly to the discovery and name of the coast, and the "B. di Noua Albion."

Dudley who published the account of Drake's expedition on this coast after Hakluyt, and the World Encompassed, says: "The reason why Drake sought and found this port [of New Albion] was "this, that having passed the true Cape Mendocino in latitude $42\frac{1}{2}^{\circ}$ "to procure water, even from $43\frac{1}{2}^{\circ}$ he found the coast so very cold "in the month of June, * * * therefore Drake found it expedient to return more to the South-Southeast, even to 38° of latitude. * * *"[†]

These are remarkable confirmations of the highest latitude reached by Drake, as obtained directly from those competent to communicate the truth to friendly contemporaries and geographers.

The coasts of Oregon and California are wholly free from outlying dangers until the latitude of Cape Orford is reached from the northward. Off this Cape lies a large area filled with high, bold and striking islets, rocks and reefs, to the number of forty-seven. The general direction of the Orford Reef is parallel with the coast, and stretches to the southeastward as far as latitude $42^{\circ} 38'$. In latitude $42^{\circ} 25'$ lies the Rogue River Reef, closer in shore than the Orford Reef, not so extensive, but very dangerous. Still farther to the southeast is

*The map is in capital condition, and is in possession of Captain Gustave Niebaum of San Francisco. The title begins "*Novissima ac exactissima totius orbis terrarum descriptio magna cura.* * * *. July 1906: this map was burned in the conflagration of San Francisco, April, 1906.

[†]Vol. III, Part II, Book VI, page 56 of *Dell' Arcano del Mare*, di D. Ryberto Dvdleo, Dvca di Northvmbria * * See Identification paper, page 50 for copy of original.

Macks Arch Reef, close in shore between Capes Sebastian and Ferrelo; the latter in latitude $42^{\circ} 06'$. Here the coast line recedes to the eastward to Chetko Cove, fairly well sheltered from the northwest winds under the high lands behind Cape Ferrelo; but withal an undesirable anchorage.

There is clear water hence for twenty miles to the northwestern islet of the Dragon Rocks of Vancouver, the present St. Georges or Crescent City Reef, which lies in $41^{\circ} 47'$.

At this anchorage of Chetko Cove which is open to the south, Drake found a "bad bay" where "the winds bent directly against "vs, and hauing once gotten vs under sayle againe, commanded vs "to the southward whether we would or no." How long he remained there is not known.

Mr. Corbett says that we have no authority for locating Drake's anchorage in latitude $42^{\circ} 03'$ at Chetko Cove; but he fails to intimate where that first anchorage was. We located it from a comparison of the narratives and our local knowledge of the uncomfortable anchorage we found it in the United States Coast Survey steamer *Active* in 1853. There was no other place of refuge from the heavy wind, swell and fog; nevertheless he was soon forced to leave it. Drake, in avoiding the Orford Reef, could not have divined there was a summer anchorage at Port Orford under the two hundred and sixty-five feet precipice facing south. We spent three and a half months there in 1851-2, and have visited it later.

Unfortunately, Mr. Corbett has a total want of personal local knowledge of the anchorages on this coast where an easily handled vessel, with that knowledge, may find temporary refuge from the strong wind and heavy swell of the summer; and seemingly he can not give credit to the judgment of men who have spent their lives in making themselves acquainted with every mile of the coast line and seaboard under the varying conditions of the seasons. The northern coast is noted for its lack of harbors of refuge. We have been in every possible shelter from northwest weather on the coast, and have assigned the Chetko Cove as the highest anchorage Drake could have made. If he headed the *Golden Hinde* eastwardly from his estimated latitude of 42° or 43° , the heavy swell, and the strong northwesterly wind would have forced the ship to the southward of east. The second anchorage would have been under Point Saint George, a very dangerous resort to a stranger, latitude $41^{\circ} 43'$; the third would have been under Trinidad Head in latitude $41^{\circ} 03'$.

We believe Drake had the Spanish charts that are represented among the München records, whereon the outline of this part of the coast is laid down as follows: "R. di Todos Sanctos" in latitude 42° ; five miles southward is the "B. di Todos Sanctos"; and at latitude $41^{\circ} 43'$ is the "C. di Todos Sanctos." This is a very remarkable exhibit of the coast between Cape Ferrelo in latitude $42^{\circ} 06'$ and Point St. George of Vancouver in $41^{\circ} 44'$. The Winchuk river debouches between Chetko Cove and Point St. George; and the Chetko river at the Cove in $42^{\circ} 03'$.

Trinidad Bay is a "very contracted" anchorage protected from the northwest winds by Trinidad Head, which rises 180 feet above the sea. A goodly number of vessels have been lost here.

If Mr. Corbett discounts Chetko Cove, he must fall back upon Trinidad anchorage.

We relegate the claim that Drake reached the latitude of 48° to the same limbo as that of Lorenzo Ferrar Maldonado, Bartolomo de Fonte and Juan de Fuca. In another paper we have shown that not an incident of de Fuca's circumstantial statement is correct.

We should not revert to other misstatements of the narratives, but it is well to understand that the question of latitude is not the only one to be considered.

The "World Encompassed" relates, as already mentioned, that at the northern limit roasted meat was frozen so soon as it was removed from the fire; that the seamen were benumbed by the cold, and the tackling of the ship was stiffened. Mr. Corbett adds that on the 4th of June rain froze as it fell. Cabrillo and Ferrelo who had reached the latitude of $42^{\circ} 30'$ * in December and January, 1542-43, do not refer to such coldness in their experience; nor did Aguilar who reached the latitude of Cape Blanco or Orford in January 1603 close to the land, report such climatic conditions, although each expedition experienced the severe southeast and southwest gales that ended with violent northwesterers. Bering and Chirikof in 1741 had no such exhibitions of cold, although they were in a much higher latitude in the summer and autumn. In later times, 1774 to 1792, we have the experience of Spanish explorers in the high latitudes to 61 degrees; and Cook, La Pérouse, Malaspina and Vancouver 1778 to 1794, and there is no such strain upon our credulity as given by the narrators of Drake's experience.

**Voyages of Discovery and Exploration on the Northwest Coast of America, 1539 to 1603.* Davidson, 1886, page 234.

The narrators of Drake's exploits seem to have given free rein to their imagination in other matters relating to their experience in New Albion.

At Drake's anchorage under the north side of the eastern promontory of Point Reyes Head one narrator writes: "There is no part of the earth here to bee taken up, wherein there is not some speciall likelihood of gold or silver"; they discovered a rabbit with "his tayle, like the tayle of a Rat exceeding long", and another adds, "and feet like a Mole, with a Natural Bag under their Chin, wherein, after they have filled their Bellies abroad, they put the rest for relieving their young". Dudley writes that "with the greatest wonder they saw many native horses, which the Spaniards had never seen before in America." One narrator says the natives were clad, yet shivered in their warm furs or huddled together to keep warm; another declares "the Men generally go naked." Dudley says "the land was quite fruitful and the climate temperate"; another writes, "Besides, how vnhandsome and deformed appeared the face of the earth itselfe! shewing trees without leaves, and the ground without greenness in those moneths of *June* and *July*," at Drakes Bay.

Drake set up a monument or post with an inscription to prove his having been there; and he declared the natives had surrendered themselves and the whole land, and had become his vassals; and having been twice crowned, he took possession of the country in the name of the Queen. Yet could neither party understand a word of the other! See Burney's criticisms thereon.

These are the authorities upon whom Mr. Corbett relies for the *Golden Hinde* having reached the latitude of 48°.

One of these stories may, however, be here explained: the rabbit described is really the gopher of California. In our first visit to Drake's Bay in 1852, we found the small rabbit known as the "cotton tail" in great numbers, but the gopher was rarely in evidence.

The rest of the stories remind us of Vizcaíno's account of what he saw at Monterey Bay in December 1602. He was a more facile romancer than Drake's narrators.

Of the dress or undress of the Indians upon this coast we have the early Spanish authority that they were generally naked. In our experience in the winter of 1851-2 at Port Orford, latitude 42° 44' 1/3, the men were all going naked, but having a deer skin hung from the neck, and swung around to the windward side of the body when the

wind was strong or cold. We never saw them shudder, or huddle together to keep warm.*

But there is no excuse for the frozen meat, and as little for the gold and silver, "the riches and treasure" and the native horses of the Point Reyes Rancho.

There is a general geographic misstatement that will bear remark. When the *Golden Hinde* reached the coast and was compelled to haul to the southward, Drake followed it carefully, seeking for a safe anchorage in which to repair the leaking of the ship, and to lay in wood, water, and provisions. They were at least ten or eleven days sailing from Chetko Cove to Drake's Bay, doubtless laying-to at night; and they declare that from their anchorage "to 38 we found "the land by coasting alongst it, to be low and reasonable plaine; "euery hill (whereof we saw many but none verie high) though it "were in June, and the Sunne in his nearest approach vnto them, "being couered with snow." Another account says: "not finding "it mountainous until we came within 38 degrees towards the line".

How are we to weigh these statements which are so contrary to the facts. The mountains only a few miles behind Cape Orford reach 2860 feet, and Bald Peak is 3056 feet. In the latitude of Point St. George the flanking masses of the Siskiyou Range reach 7000 feet at 30 miles inland, and are reckoned good landfalls. When the *Golden Hinde* was swinging around Capes Sebastian and Ferrelo for her first anchorage the mountains overlooked her from a height of 2285 feet.

In the region of Pelican Bay the narrator saw the mountains had retreated, and that the low valley was densely forested, but no remark is made thereof.

Immediately south of Crescent City Bay the mountains rise rapidly, with bold shore cliffs. Eight miles east of the mouth of the Klamath River Mt. Toorup reaches 4065 feet; and up the narrow valley of the river he might have seen the snow peak of Mt. Shasta 14360 feet above the sea.

The vertical cliffs of Gold and Gihon Bluffs in latitude 41° 20', rise from 100 to 500 feet, with spurs of the Trinity Mountains behind

*Kotzebue, when on the coast of Alaska in 1826 writes: "In the winter, during a cold of "10° Reaumar the Kalushes walk about naked, and jump into the water as the best means "of warming themselves. At night they lie without any covering, under the open sky, near "a great fire, so near indeed as to be sometimes covered by the hot ashes." Vol. II, page 50. See Bibliography.

them. Five miles behind Rocky Point, Trinity Mountain is 3010 feet in height.

At Cape Mendocino (latitude $40^{\circ} 26'$) the grassy ridge rises to 1360 feet in three miles, and the coast takes a decided trend to the southeast thence to Point Arena, 94 miles distant. This is a markedly forbidding coast line; King Peak rises to 4090 feet in two and a half miles from the shore; hence to the southeastward the range continues from 3000 to 2200 feet high near Russian River.

That is the land which is described as "low plaine": those are the hills declared to have been covered with snow in the middle of June 1579. Only one explanation can be offered.

Navigators have honestly misconstrued appearances as La Pérouse's volcano on Cape Mendocino, which may have been an extensive grass fire on the treeless ridge, or a forest fire from one of the wooded valleys. Cook saw King Island in the Bering Sea by extraordinary refraction, and located it as a second island: Vancouver saw the Island of San Clemente from the Presidio of San Diego, by extraordinary refraction, and plotted it as another island which he called San Juan. We have experienced cases of extraordinary refraction on the coast, and in the mountains.

The seasons were then the same as they are to-day. We have the same winds and the same "most uile, thicke, and stinking fogges" which Drake experienced. And the same fogs at Drake's Bay where it is related that "neither could we at any time, in the whole fourteene "dayes together, find the aire so cleare to be able to take the height "of sunne or starre."

This account of his experience at Drake's Bay is borne out by later observations, although one writer* adduces it as "the one "doubtful point in the account of the climate." He quotes Robert Greenhow to prove that it is "not exaggeration, but a 'positive and " 'evidently wilful falsehood' credulously inserted by the general "compiler of the 'World Encompassed' "† of the climate at Point Reyes. "From July 2, 1859, the fog hung over the promontory of "Point Reyes for thirty-nine consecutive days and nights. The "Sun was invisible for the first nine days, and on shore it was visible

**Dictionary of National Biography*. Edited by Leslie Stephen and Sidney Lee. * * * London 1885-1901. 66 vols. See Volume XV, page 431.

†Greenhow, Robert: *History of Oregon and California*, 1845; (being the second edition), Boston. Page 75n.

"only at mid-day for the next thirty days; but the fog hung densely over the water."*

In this connection Professor Alexander G. McAdie of the Weather Bureau Service on this coast, has examined the records of five consecutive years, during the time of season Drake was at this anchorage, and has published his results in tabular form, from which he concludes "that the statement of the first travellers is fully borne out by the records of to-day."†

It is a satisfaction thus to verify whatever statements have been made in the narratives; for further particulars see page 136 *et seq.*

It is perhaps pardonable at this time to recall the fact that in the disputes which took place half a century ago between Great Britain and the United States as to their respective claims to the right of territory on this coast dependent upon discovery, one of the strong points made by Great Britain was the discovery of Drake as far north as the parallel of 48 degrees, although he did not go through the formalities of taking possession until he reached the latitude of Drakes Bay. Here he went through a grotesque performance of taking possession, of which the least said the better. And if any later galleon should seek refuge here he left a monument in proof of his landing. This was "a plate nailed upon a faire great poste, "whereupon was her Majestie's name, the day and year of our "arrival there, with the free giving up of the province and people into "her Majestie's hands; together with her highness' picture and arms, "in a piece of five-pence of current English money, under the plate, "whereunder was also written the name of our General."

The formality of taking possession of this immediate vicinity had been performed by Cabrillo when he anchored his ships the *San Salvador* and *La Victoria* in forty-five fathoms of water, in the Gulf of the Farallones, "on Friday the seventeenth day of November 1542"; thirty-seven and a half years earlier than Drake, and when on a voyage of discovery and exploration.

**Coast Pilot of California, Oregon and Washington*: Davidson: Washington 1889: page 232.

†*Climate and Crops*. California Section, April 1902, pages 4 and 10.

DRAKE CARRIED TO THE LATITUDE OF VANCOUVER ISLAND AND ANCHORED IN SAN FRANCISCO BAY.

GARDINER G. HUBBARD.

One of the latest authorities has declared that Drake reached "the latitude of Vancouver" [Island], "took possession", and named it "New Albion"; "landed at the harbor of San Francisco, refitted "his ships," etc.

We are afraid some part of the paper was written without careful examination of authorities, and certainly with no personal knowledge of the coast.

In 1893 Mr. Gardiner G. Hubbard, President of the National Geographic Society of Washington, presented a paper upon the general research in geography, and in speaking of Drake he said that "instead of returning as he had come Drake determined to seek and "find the fabulous strait so long sought by Columbus, and by that "channel to find his way home.

"He followed the Coast from Central America northward to the "latitude of Vancouver Island, [$48\frac{1}{2}^{\circ}$ - 51°] and took possession of the "land for England, calling it New Albion; then, finding the coast "still trending to the northwestward and the weather growing more "and more severe, he gave up his attempt, landed at the harbor of "San Francisco, refitted his ships [sic], and returned home by the "Cape of Good Hope. * * *

"This voyage of Drake completed the discovery of America from "the northern coast of Labrador southward around Cape Horn and "northward to 48° , the latitude of Vancouver island."*

Our quotations are from pages 15, 16, and the writer speaks of Drake's ships, not ship, in San Francisco Harbor.

The five charts in that number are Claudius Ptolemy, circa 150, Toscarelli 1474, Chronicon Nurembergense 1493, Juan de la Cosa 1500, Ruysch 1508.

**The National Geographic Magazine*; Vol. V, pp. 1-20, pls. 1-5. April 7, 1893. The paper was presented January 13, 1893.

THE GOLDEN HINDE PLACED IN THE HARBOR OF SAN FRANCISCO.

JUSTIN WINSOR, AND EDWARD EVERETT HALE.

The account of Drake's advent upon this northwest coast, is very unevenly given in the History of Mr. Justin Winsor.*

Dr. Hale links the history of the slave traffic carried on by Hawkins and Drake, with their plunderings in the voyages of these navigators. Their crimes are, in a measure, condoned: and stress is laid upon the asserted treachery of certain Spanish authorities who resisted the piratical raids of the English. In one of the expeditions on the Isthmus of Panamá Drake is represented as viewing "the Pacific from a spot probably near the place where Balboa had first seen the Pacific, and vehemently * * * implored divine assistance * * that he might make a perfect discovery of the same."

This place of view was said to be from a tree overlooking Panamá, but Balboa first saw the Gulf of San Miguel.

These minor irregularities of Drake are smoothed over, and the expedition of 1577 reaches the coast of America within a page. Mr. Thomas Doughty is beheaded in a lawful manner. The voyage of plunder is carried through a few sentences; no reference is made to the invaluable sea charts taken from Don Francisco Xarate, and when Drake reached Guatulco we are assured that the "next day", he "struck northward on the voyage he discovered the coast of Oregon and of that part of California which now belongs to the United States.

"A certain doubt hangs over the original discovery of the eastern coast of this nation. There is no doubt that the coast of Oregon was discovered to Europe by the greatest seaman of Queen Elizabeth's reign."

Dr. Hale then quotes Fletcher whose account brought the *Golden Hind* to the latitude of 42°; and made the land three days after.

No decided opinion is expressed by the historian about the latitude of the landfall; and "it is a question how far north Drake went"; but the ship is sailed southward to latitude 38° 30' where they came to a "convenient and fit harbour."

We take exception to the dictum that Drake was the first to discover the coast of Oregon to Europe.

**Narrative and Critical History of America* * * * Boston and New York: 8 vols. 8vo. Vol. III.

Cabrillo and Ferrelo did not, in 1542-43 see the Coast of Oregon; but at that time, and certainly before Drake's advent, the homeward bound Spanish galleons had made their landfalls north of Cape Mendocino (latitude $40^{\circ} 26'$), as we find Spanish names of places on the charts of Mercator and Ortelius, 1569, 1570: Hondius must have obtained his Spanish names from the vessels which traded with "las Filipinas." The cartographer of the München charts must have appealed to the same sources. These authorities record the Spanish names to latitude $42\frac{1}{2}^{\circ}$. Drake's narrators used none after he left Guatulco.

The reader has only to consult the chart of the outline of the Pacific as laid down by Captain James Burney R. N. in 1803 in Volume I of his "Discoveries in the South Sea" to be convinced that very much was known previous or at the time of Drake's undertaking.

Moreover, Dr. Hale has mistaken the course of the galleons in crossing the Pacific. He writes, on page 72, Vol. III, "From the 'time when the Government ships crept along the coast to Mendocino, and then turned unwillingly, to their long voyage to Asia, 'observations on that coast were doubtless reported by navigators. 'The line of coast took different courses and different names accordingly.'"

Exactly the opposite course was pursued by the galleons: They left the coast of Mexico on the direct course to the Ladrones and the Philippines, and on their return they kept well to the northward to make the landfall about the latitude of Cape Mendocino and then ran southeastward along the California coast. For an illustration consult the chart captured by Lord Anson in 1741. Drake had the Spanish sea-charts which he had captured off the Gulf of Fonseca from Xarate; and perhaps others.

The exaltation of Drake as the greatest seaman of the Elizabethan era is not borne out: surely Hawkins was as bold: Cavendish circumnavigated the globe: Howard was created Lord High Admiral of the fleets opposed to the Invincible Armada. Drake failed in his 1585-86, and 1595-96 expeditions.*

It was the enormous amount of plunder secured in the 1577-80 expedition that illumined his audacious career.

But what is so sadly lacking in the question of Drake's landfall on the coast of Oregon, is more than made up in the presentation of

*Drake's burial at sea is located off Puerto Cabello: page 73: ['Porto belo.]

authorities *pro* and *con* the anchorage of the *Golden Hinde* in the Bay of San Francisco.

It was this exhibition of the evidence *in extenso*, which prompted us, in 1890, to write the Identification Paper published by the California Historical Society: page 6. Therein we have presented nearly all the points of evidence from the texts and charts of the old authorities. The "Portus Novæ Albionis" of Hondius shows the entrance to the Laguna Limantour and the Indian rancheria on the west shore thereof, and the eastern promontory of Point Reyes Head (which forms the harbor); and the two elevations where the Indians built their fires upon the departure of the ships.

Yet of this chart Dr. Hale writes:* "the map of Hondius gives a "chart of Drake's bay which has, unfortunately no representation "to any bay on the coast, and is purely imaginary."

This stricture is not borne out by the facts. From our personal acquaintance with the locality, and by a copy of a photographic view we have proved that it was drawn by some one who had given the sketch or the information to Hondius. On the München chart No. 85 the outline had been changed three times, as indicated by the original pencil outlines. No survey had been made and the outline, orientation and soundings were simply eye sketches and estimations.

We have noted the tradition of the Nicasio Indians of Drake's vessel.†

The narrators have recorded the visit to the Isles of St. James, and the landing upon the Southeast Farallon to obtain seal meat. The *Golden Hinde* could not have made that group from the Golden Gate with the summer westnorthwest wind. They are profoundly silent about the magnificent and unparalleled entrance to the Bay of San Francisco. It would have filled them with irrepressible admiration. As a matter of fact it was a physical impossibility for them to have seen it from any position on Point Reyes Head, on account of the distance, and also of the overlapping of the high hills on either side; just as it was not visible to Portolá when he was nearly one thousand feet above the sea when crossing Point San Pedro only thirteen miles to the southward of the Heads of the Golden Gate.

We have presented the topographic and hydrographic map of 1852, surveyed by the United States Coast Survey in 1852, (the topography by a member of our party), to demonstrate that it is not an "open

*Winsor: Vol. III, page 75.

†The Nicasio Valley is only eleven miles distant, a little north of east from Drake's Bay.

roadstead" as had been declared by Dr. Hale in the Proceedings of the American Antiquarian Society. When Vancouver was on this coast, 1792-4, he passed Point Reyes, and noted Drakes Bay before he entered the Golden Gate; and has left a rough sketch of it.

In June 1796 Captain Broughton, who had been with Vancouver, entered Drake's Bay with H. M. sloop of war *Providence*,* and anchored with his ship and tender. He writes; "This bay affords "good shelter, except from the easterly winds; but the sea cannot "be very great even with them, as they blow over the land about "San Francisco. There is anchorage here when the south point of "the bay bears S. 50° E. off shore." In the afternoon when within two leagues of the land south of Port San Francisco, "we could not "see the entrance, on account of the haze, or the rocks which lie to "leeward called Farillones": page 60.

Hundreds of vessels have anchored in this bay under stress of weather; and we have anchored there in southeast weather. We believe none of the authorities quoted by Dr. Hale ever saw the bay from the anchorage.

See Appendix to this paper.

*A *Voyage of Discovery to the North Pacific Ocean* * * * in the years 1795, 1796, 1797, 1798, by William Robert Broughton. * * London 1804: 1 vol. qto. page 59: the *Providence* was 400 tons burthen, carried 16 guns, her complement was 115 officers and men: the tender was a schooner of 30 tons.

THE DOUBT OF THE DICTIONARY OF NATIONAL BIOGRAPHY.—THE CLIMATE OF DRAKES BAY.

The description of Drake's anchorage on the coast of California is discredited by an English authority* on peculiar and erroneous grounds. "The one doubtful point is the account of the climate, "which is described, with much detail, as excessively cold and "foggy, (Vaux, pp. 113-118). This is now said to be an exaggeration; but to speak of the climate near San Francisco or any where "on that coast in July in these terms is not exaggeration, but a 'positive and evidently willful falsehood', credulously inserted by the "original compiler of the 'World Encompassed.'"

The editor does not give the edition of Greenhow's work from which he quotes; it is evidently the Boston, (there was an edition of 1840) or second edition of 1845, because the foot note referred to on page 75 contains the assertion about the falsehood.

Robert Greenhow† was no lover of English narratives of discovery and exploration on this northwest coast of America, but in writing of Drake's having reached the latitude of 42°, he says, on page 73:

"He had, in fact, reached the part of the Pacific near the American "Coasts, where the winds blow constantly and violently, during the "summer, from the north and northwest, accompanied generally by "thick fogs, which obscure the heavens for many days, and even "weeks, in succession; and, finding these difficulties increase, as he "went farther, 'he thought it best, for that time, to seek the land.'"

In April 1902, Professor Alexander G. McAdie the Forecast official, and Director of the station of the U. S. Weather Bureau at San Francisco, called attention to the statement in the Dictionary of National Biography, and abstracted from the records of the station on Point Reyes Head, the temperature and the days of fog and clear weather for the period covering the similar period of thirty-seven days Drake was at the anchorage in the Portus Novæ Albionis, for a term of five years. The observations at 7 hrs. A. M. and 5 hrs. P. M., show a mean temperature of 52°.5 Fahr., with a range from 46° to 78°. The last was an extreme case, only four other observations reaching over 60°.

**The Dictionary of National Biography*, * * Vol. XV, page 431 under the heading Sir Francis Drake.

†We were personal friends; he believed in the Juan de Fuca claim notwithstanding our description of the strait and numerous inlets that proved de Fuca's story to be absolutely untrue in every detail. He had doubts about Vancouver, although we had found his narrative and charts trustworthy wherever we had worked on the northwest coast.

In that period there were noted 97 days of fog, 3 of rain, and 81 clear.

Professor McAdie referred to our "Identification" paper wherein we note thick fog for thirty-nine consecutive days from July 2, 1859.

Another fact should be noted: during strong winds from the North and Northwest the weather is clear.

These facts from observation break down the erroneous statement and the one doubt of the Dict. Nat. Biog.

We called attention to the publishers of the Dictionary to this error: they acknowledged the letter and referred it to the Editor; but we had no further acknowledgment.

A QUESTIONABLE AUTHORITY.—DRAKE REACHED 38° OF LATITUDE.

JULES VERNE.

On the subject of authorities we may be permitted to present one of the most astonishing statements concerning Drake that has come within our ken. It is found in "The Exploration of the World. Famous Travels and Travellers" * * * by Jules Verne. One volume, 8vo., illus. New York 1879.

In the preface he gives credit to "M. Gabriel Marcel, attached to the Bibliothèque Nationale", for all possible accuracy in this work of four hundred and thirty-two pages.

The history of Drake's exploits are very brief. Drake does nothing after the capture of the *Cacafuego* except to decide upon the route for his return home: first by way of the Strait of Magellan; second, through the South Sea and around the Cape of Good Hope; third, "he "could sail up the coast of China and return by the Frozen Sea and "the North Cape" to the Atlantic; page 366. And he continues with this remarkable statement that Drake "therefore put out to "Sea, reached the 38° of north latitude,* and landed on the shore of "the Bay of San Francisco, which had been discovered three years "previously by Bodega. It was now the month of June, the temperature was very low, and the ground covered with snow. * * * "Drake did not advance farther north, and gave up his project of "returning by the Frozen Sea"; around Siberia and the North Cape as shown in a previous paragraph, and not around America by Hudson Bay and the Labrador coast.

It is amazing how many errors may be crowded in so few lines.

THE GOLDEN HINDE AND THE GOLDEN GATE.

There is one authority in the Drake's Bay discussion who ends her poetic vision of his presence on this coast, that seems to have been based on the force of alliteration.

"Through the Golden Gate at the dawn of day,

"The good Sir Francis sailed away,

"In the Golden Hind from the Golden bay."

We refrain from mentioning her name because she has written some charming verse, but we submit that something more than sentiment is necessary to solve the problem.

*He probably accepted the latitude assigned to Drake by Samuel Johnson, 1741.

CONCLUSION.

This investigation has developed several points of geographic and historic interest.

We can not refrain from expressing our admiration for the performance of the *Golden Hinde*, nor for the daring which carried her without a consort around the world.

We learn that no navigator has studied the probable course of the *Golden Hinde* from Guatulco to her northern limit; or who has given particular attention to the characteristics of the currents, winds, and weather through that part of the Pacific Ocean at that season of the year.

No one has challenged the meagre and erroneous descriptions of the physical features of the coast from the northern landfall southward to Drakes Bay.

We find no reference to the insufficient instrumental means and methods which Drake and all navigators of that period possessed for determining their geographic positions at sea.* Under such conditions the sentiment of the investigator has been apt to govern his judgment; or he has assumed the accuracy of the few determinations of position as if they had been made with modern instruments, and reduced by rigorous methods.

Bias had its influence upon the legal writer for the higher latitude when the United States presented claims for Pacific coast territory north of latitude forty-two degrees.

In the question of Drakes Bay or San Francisco Bay as the resort of the *Golden Hinde*, much has been written, but little or no examination has been made.

Among the many authorities who have written upon that subject we recall no one who was personally familiar with the details of Point Reyes Head, and with the advantages of Drakes Bay as a harbor of refuge in any weather. We have shown our acquaintance and experience with that anchorage since 1852; and the discussion of the subject in our "Identification" paper of 1890, has not been traversed.

And finally, for the highest latitude reached by the *Golden Hinde*

*The only mention of any instrument on the *Golden Hinde* is the remark of one of the narrators: "in the time of this incredible storme, the 15 of *September*, the moone was eclipsed "in Aries and darkened about three points for the space of two glasses": World Encompassed page 83. This doubtless referred to the sand glass that ran one hour, and yet kept in stock by dealers.

we declare, with the older authorities, for the position of the *Golden Hinde* at sea in latitude forty-two or forty-three; and that Drake made the landfall about the latitude of forty-two. We place the first anchorage for his vessel at Chetko Cove in latitude $42^{\circ} 03'$.

We declare for the second anchorage under the eastern promontory of Point Reyes Head, in latitude $38^{\circ} 00'$, where only the white cliffs faced his ship.

GEORGE DAVIDSON.

February 14th, 1906.

October 9th, 1907.

February 29th, 1908.

APPENDIX.

What may have been the final judgment of Mr. Justin Winsor about the San Francisco Bay anchorage, we do not know. Upon the receipt of our Identification paper he addressed to us the following letter:

“

HARVARD
COLLEGE
LIBRARY.

CAMBRIDGE, MASS.,
GORE HALL, June 2, 1890.

“DEAR SIR:

“I am greatly obliged to you for a copy of your Identification of “Drake’s Anchorage, which I have just looked through with interest, “and shall shortly read more carefully. Your opportunities have “been great and you ought to have settled the question. I feel that “I shall think you have.

“Very truly

[Signed] “JUSTIN WINSOR.

“PROF. DAVIDSON.

“I am very busy preparing for a year’s absence in Europe, and “may not go over at once your tract with the attention which it “deserves.”

Mr. Winsor returned to the United States in the fall of 1891; and died in 1897.

We believe that Dr. Hale still believes that the *Golden Hinde* anchored in San Francisco Bay. Some years since when he visited San Francisco we were prepared to accede to his request made through a friend that we should let him put his foot on the spot where Drake landed in his true anchorage.

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